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Report of Cooperative Extension Work in Agriculture and Home Economics, 1945

UNITED STATES DEPARTMENT OF AGRICULTURE,
EXTENSION SERVICE,
Washington, D. C., October 15, 1945.

HON. CLINTON P. ANDERSON,
Secretary of Agriculture.

DEAR MR. ANDERSON: I submit herewith the annual report of the
Extension Service for the fiscal year ended June 30, 1945.
Yours sincerely,

M. L. WILSON, *Director.*

CONTENTS

	Page		Page
How science served agriculture during the war.....	2	The war jobs got priority—Con.	
The year's extension work in brief.....	2	Spray rings served many.....	14
Who did the work?.....	2	Forest products go to war.....	14
What did they do?.....	3	On feeding families.....	15
How did they do the job?.....	4	Gardening in 1945.....	15
What "cooperative" means.....	4	More than 18 million gardens in 1944.....	15
The demonstration way.....	4	Practices improved.....	16
The war jobs got priority.....	5	Fruit plantings continue.....	16
Getting the work done.....	5	Farm flocks supply family tables.....	16
Devices made and shared.....	5	Farm family need not lack meats.....	17
Placements total 6 million.....	6	Family cow is a "must" on the farm.....	17
Town youth, women aided.....	6	Preserved food counted in billions now.....	18
Town women recruited by Land Army.....	6	Long- and short-time trends given.....	18
Public kept informed.....	7	Freezing boom predicted.....	18
Less than minimum sum spent.....	7	Equipment problems were met.....	18
Furnishing livestock products.....	8	More families are reached.....	19
Animal death losses decline.....	8	Public likes oversea program.....	19
Smaller crews do ranch jobs.....	8	Helping with other war programs.....	19
New practices save pigs.....	9	The welfare of the people comes first.....	21
Eight-point dairy program is continued.....	9	On being well fed.....	21
Poultry, egg goals exceeded.....	10	Nutrition committees were aided.....	21
Livestock gets 4-H interest.....	10	Publications widely used.....	22
Expanding crop production.....	11	School-lunch program is supported.....	22
Values of fertilizer demonstrated.....	11	On staying healthy.....	23
Cotton—the "problem child" crop.....	11	Avoiding hazards to mental health.....	23
Yield goes up as acres decrease.....	12	About the farmhouse and its surroundings.....	24
Fighting chinch bugs saves 13 million.....	13	On being well clothed.....	25
Mechanization aids production.....	13		
Problems beset truck growers.....	13		

	Page		Page
We are protecting our heritage----	25	Meet the men and women of to-	
On conserving soil and water----	25	morrow—Continued	
Conservation increases produc-		Older young people aided, too----	32
tion-----	26	Science changes agriculture and	
Replenishing forests, sheltering		homemaking-----	33
wildlife-----	26	Specialists guide agents' teach-	
On preserving human resources--	27	ing-----	34
Rural folks help themselves—and		Publication control is estab-	
one another-----	27	lished-----	34
Leadership is indispensable-----	27	We study our job-----	34
Neighborliness has no substi-		Extension effectiveness meas-	
tutes-----	28	ured-----	34
JMT work new but successful--	29	Teaching devices evaluated-----	35
Discovered skills become earning		Extension pioneered in read-	
sources-----	29	ability-----	35
Other ways are found and used--	29	Foreign workers trained-----	36
We help hold the line for posterity--	30	Extension workers look ahead-----	36
On preventing inflation-----	30	Local groups are planning-----	36
On family economics-----	30	Interest in health work is grow-	
Preparing for peace-----	31	ing-----	37
Meet the men and women of to-		Plans for housing begun-----	37
morrow-----	31	Leaders study national policy----	37
4-H represents quality and quan-		Congress grants increase in	
tity-----	31	funds-----	37
Leaders aided-----	32	Conclusion-----	38
Sometimes they teach their		Statistics-----	39
elders-----	32		

HOW SCIENCE SERVED AGRICULTURE DURING THE WAR

HISTORIANS may recall 1945 as a year when country folk of this Nation got their "second wind."

Since 1941 farm and ranch families had met numbers of crises. Stock piles of food, feed, and fiber they had set in store had dwindled. As countries were liberated, there were more mouths to feed. And there were fewer hands on the farm to do the job. Old machinery had grown older, and the new came in dribblets. There had been acute shortages of insecticides and fertilizers and other aids farmers use as stewards of the land and as husbandmen.

Spring of 1945 brought victory in Europe. But farm and ranch people went on with their jobs as though the war might last another 4 years. It was the safe and the patriotic thing to do. Meanwhile, they planned the changes which peace and time would permit.

The weather for the Nation as a whole had been rather friendly to the farmer and stockman. And the farm income was expected to be the highest in history. Mindful of all these things, farm families kept at their jobs.

The thinking and experience of rural people during 1945 was paralleled by that of cooperative Extension Service workers in the counties, at the State colleges, and in the Nation's Capital.

THE YEAR'S EXTENSION WORK IN BRIEF

Who Did the Work?

The story of extension work during the year has more than a million heroes and heroines—among them 1,132,880 farmers, rural women, and older youth who served as voluntary local leaders. They

aided 8,183 county workers, including war emergency assistants, in carrying out the cooperative Extension Service program.

They worked in an organized way in 84 percent of the rural communities of the Nation. Together, they influenced 7,435,781 families to make changes in agricultural and homemaking practices. Of this number, 4,658,535 were rural families.

Altogether, 1,590,598 boys and girls were enrolled in 4-H Club work, and the number of older youth reached by the extension programs brings the total to about 2 million.

More than a million farm women who were members of home demonstration clubs helped. So did many other organizations and groups.

What Did They Do?

Although supplies of feed had dwindled since early in the war, farmers and stockmen in this country produced a record amount of meat animal products in 1944. Meat alone amounted to 24½ billion pounds. Milk production in 1944 was a billion pounds higher than a year earlier. Poultry and egg goals have been exceeded each war year without incentive payments.

From 1935 to 1945, total crop production in this country increased 33 percent. But the acreage of crops increased only 6½ percent. Better farming and increased yields made the difference.

Thirty years of extension demonstration work helped make this wartime production possible. The application of scientific findings in growing crops and raising animals was one factor. Good weather generally blessed the farmers' efforts. In addition, the Extension Service helped recruit and place farm labor to tend and harvest food, oil, and fiber crops required for war.

During the year Extension-operated farm labor offices made more than 6 million farm-labor placements. This represented 2,650,000 individuals, many of them town men and women, boys, and girls.

The cooperative Extension Service provided leadership for the victory garden program, and in 1944 there were 19 million gardens in this country. Thirteen million of these were town and city gardens. Rural people also were encouraged to provide other elements in a well-rounded home food supply—fruits, meats, poultry products, fats, and the like. No one knows how much food was conserved in a variety of ways during the year, but 4-H Club members alone canned more than 22 million quarts. Freezing as a preserving method grew in importance during the year.

Conservation, too, was the keynote in family clothing and home-improvement programs. More attention was given to health and more concern shown for protecting the land and the forests. Both human and physical resources were thus conserved.

Although farm income was high, extension workers urged families to get out of debt, forego all unnecessary expenditures, and invest heavily in war bonds. Timely outlook information aided families in spending and selling wisely.

And, though the emphasis was on production, efficient farm management, and maintaining and building the soil, there was time for discussion of fundamental issues—the fight against inflation, the necessity of international cooperation for permanent peace, better citizenship and family life, and neighborliness.

Rural leaders and extension workers gave thought, also, to returning war veterans and provided counseling service for demobilized men returning to the farms and ranches.

How Did They Do the Job?

In all these activities, some stimulated by war and some of a long-time nature, the Extension Service had the cooperation of many Government and private agencies, and of the press, magazines, and radio stations.

There were many other ways county extension agents reached people. They had more than 11 million office calls and 8 million telephone calls. Attendance at meetings they conducted exceeded 35 million. And demonstrations on farms and ranches and in homes reached many more people in an indirect but no less effective way.

Extension workers were war workers. They devoted about 82 percent of their time to war jobs. Since Pearl Harbor 1,400 of them had put on the uniform of their country. In 1945 there was 1 county extension worker to every 8,260 rural people in this country. This represented a heavy teaching load, but unpaid local leaders lightened it.

It was a busy year, but extension workers and the people they helped were rewarded with the knowledge they had contributed to victory.

What "Cooperative" Means

Seventy-seven percent of all extension workers are county extension agents who live among rural people. These county workers are a sounding board for attitudes and wishes of people on the land. But they serve, too, as a voice for the Government, explaining needs of the Nation and how they may be met.

The cooperative extension system is now 31 years old. It is the farm and home teaching arm of the United States Department of Agriculture and the land-grant colleges of the 48 States and Hawaii, Alaska, and Puerto Rico. Federal, State, and county governments contribute to its financial support.

Extension is a partnership enterprise in many ways. The farmer contributes his experience, his time, and his willingness to try new methods. The Extension Service, through its agents, provides the technical suggestions, the findings of science translated into the language of the barnyard and the back porch. It also passes along the fruitful experiences of other farmers and homemakers.

The Demonstration Way

This combination of farmer resourcefulness and extension teaching produces what is called a "demonstration"—proof that scientist, educator, and farmer were right—a guidepost to other farmers who need not spend the time or share the risks. The indirect influence of the demonstration eventually touches all farm families.

There are many other ways extension workers teach. They train leaders to multiply their teaching. They show people new methods at meetings of clubs and community groups. They provide timely information through local newspapers and radio broadcasts. They distribute publications, encourage exhibits, and use innumerable educational devices aimed at providing the most help for the greatest number of people.

Fortunately, county extension agents have a great reservoir of information from which they can draw. The findings of all agencies

within the Department of Agriculture are at their disposal. And the results of nearby experiment stations, supplemented by farmer experiences, are helpful, too.

The educational program of the Extension Service is as broad as the needs of people living by and on the land. Although the educational work necessary to the fullest food production has been Extension's primary job in wartime, the organization is charged also with appropriate cooperation with other agencies in and outside of agriculture and home economics.

This is the story of cooperative extension work in the States and Territories during the fiscal year ended June 30, 1945. Many of the statistics, however, apply to the calendar year 1944.

THE WAR JOBS GOT PRIORITY

Getting the Work Done

Perhaps the greatest handicap farmers and stockmen faced in 1945 was the scarcity of farm labor, both seasonal and year-round. About 4 million workers had left farms for the armed services and industry since Pearl Harbor. This meant that the American farm woman spent more time on the tractor and in the fields. Both boys and girls carried oversized loads of farm and home responsibility as well.

The farm labor shortage has been met principally in these ways:

1. Through farmers and their families working harder and longer hours than ever before.
2. Through better utilization of labor and tools.
3. Through the help of off-the-farm labor.

In both of the last two methods the cooperative Extension Service was active.

So it is not surprising that the average county agricultural agent in areas where commercial production is heavy devoted more time and attention to the extension farm-labor program than to any other single activity in 1945. Most agents had the help of county farm-labor assistants. These aided with the recruiting and placing of workers, solving of housing problems, and reporting frequently on the labor situation within the county.

But the agent himself had the responsibility. He organized farm-labor advisory committees and farm-labor cooperatives, kept abreast of labor needs, trained farmers in the handling of workers and workers in learning new jobs, and conducted the local mobilization campaigns. Furthermore, he encouraged labor-saving devices and practices.

Devices Made and Shared

Farmers have a knack for gadgets. Often stimulated by ideas or suggestions from agents and agricultural engineers, they contrived mechanical means of doing back-breaking jobs—buck rakes, power hoists, power saws, wood splitters, balers, post-hole diggers, pickers, sackers, loaders, and the like. In the State of Washington an extension exhibit of labor-saving devices toured every county. It reached 40,000 people.

Labor-saving field days featured farmer ingenuity in Wisconsin, Illinois, Oregon, Texas, and other States. Many a farmer visiting these shows said, "Now, there's an idea," and went home to use it and improve on it.

Pooling of machinery and swapping work in an organized way within a neighborhood proved successful in 22,017 communities. Forty percent of the farmers in South Carolina exchanged labor, and 15,372 swapped or pooled machinery.

"Off-the-farm" labor was mentioned earlier as one way of offsetting the shortage. That meant town and city people who did part-time emergency farm work. It meant about 200,000 foreign workers, including prisoners of war. Occasionally it meant members of the armed forces, conscientious objectors, or Japanese internees. These were placed by the Extension Service.

Placements Total 6 Million

To help farmers employ seasonal and year-round workers, the Extension Service operated nearly 10,000 recruitment and placement offices in every county of the Nation where additional farm labor was needed. About half of these were operated by voluntary leaders. During the year the centers made more than 6 million farm-labor placements, which represented about 2,650,000 individuals. These worked on at least 700,000 different farms.

Boys and girls recruited for farm work become Victory Farm Volunteers and are known familiarly as VFV's. Placements of VFV's through extension efforts numbered 1,708,292 last year. Many other youths found their own jobs or were recruited directly by farmers. So it is probable that more than a million and a quarter nonfarm boys and girls did agricultural work during the year.

Town Youth, Women Aided

In Oregon, where youth placements totaled 54,791, VFV's organized in 172 platoons harvested 15,556 tons of food crops valued at \$2,566,448. The workers' average age was 13 years. In New York, 1,741 city and town boys were placed on individual farms for a season's work. Farmers rated 75 percent of the boys "excellent or good" hands and requested 68 percent of them for another season.

At three Maryland camps VFV's detasseled enough hybrid corn to produce 50,000 bushels of seed corn. The job required 17,877 hours.

Town Women Recruited by Land Army

The Women's Land Army, now 3 years old, recruited nonfarm women, especially for seasonal and part-time work. Its placements totaled 776,693, representing 400,000 different women. Further, WLA workers believe an equal number of nonfarm women were recruited directly by farmers or found their own farm jobs.

These figures have no relation to the hundreds of thousands of farm wives and daughters who did the double job of housework and farmwork. In some Kansas counties as many as 80 percent of the farm women helped with the wheat harvest.

Town women have been accepted reluctantly by farmers, but they have proved themselves. Their help has been especially valuable at harvesttime for crops such as apples, peaches, beans, tomatoes; potatoes, peanuts, and cotton. Teachers and college girls spent 2 to 3 summer months in farm work. Businesswomen worked part of their vacation time. Homemakers answered local calls during peak seasons. In Salem, Oreg., for example, 500 car pools of women were organized into "housewives' specials"—emergency groups of 35 to 40

workers each. They went to the fields at 8:30 a. m. and returned about 3 p. m.

Michigan placed 14,197 women in farm work. They picked cherries, raspberries, and beans, and topped onions. In the fall of 1944 the Plattsburg (N. Y.) Teachers College supplied 260 young women for apple picking every afternoon for 2 weeks. They picked nearly 20,000 bushels in about 5,000 hours.

Smith College, in Massachusetts, recruited 173 students for the Land Army. They "gave New England farmers steady and conscientious assistance." Apricot, berry, grape, hop, and rice crops drew on the WLA for 46,713 women in California.

Farmers have appreciated women's willingness to learn how to do a farm job. This comment of a midwestern farmer is typical: "I was in an awful jam or I never would have tried them. Now, I will say that they were successful and helped me get the job done."

Public Kept Informed

A Nation-wide information program laid the groundwork for the farm labor program. The Office of War Information and the War Advertising Council aided by enlisting the valuable support of commercial concerns, advertising agencies, national magazines, and the radio industry. Both daily and weekly newspapers were generous with space for stories and pictures.

Federal and State labor offices stimulated cooperation from the public through posters, leaflets, and other publications. And when the public was aware of an emergency, that emergency was met. For example, in Beadle County, S. Dak., 60 crews of industrial workers from 35 towns worked during week ends, evenings, and free days to shock 19,000 acres of grain.

Sometimes the need warranted interstate movement. Kentucky men and women picked potatoes in Maine. Florida recruited 156 high-school girls for work on Connecticut tobacco farms. Spanish-speaking migrants followed the cotton harvest in Texas and helped with production of sugar beets in Northern and Western States.

More than 100,000 local leaders helped in working out exchanges of labor and in determining community needs. In Greene County, Ark., letters were sent to 45 neighborhood leaders asking their help in recruiting 100 workers for the midwestern wheat harvest. The leaders received their letters on a Monday, and by Wednesday 122 men had signed up at the Extension office for out-of-State work.

Less Than Minimum Sum Spent

For providing labor to produce and harvest war crops in 1943 and 1944, the Cooperative Extension Service was appropriated funds by the Congress. The minimum sum was \$14,000,000, and expenditures by the State and national farm-labor offices were not to exceed \$22,500,000. As in 1943, the job in 1944 was done with less than the minimum. Expenditures for the 2 years totaled only about \$12,737,150. The remainder was used for the 1945 program, as a result of continuing legislation.

No major loss of food or war crops due to the labor shortage has been reported. This is remarkable for three reasons: The Nation in 1945 had 900,000 fewer farm workers than during the 1935-39 period. Current farm labor was less experienced and less skilled than before

the war. And finally, farmers were producing more, in spite of these handicaps.

Furnishing Livestock Products

Meat, milk, eggs, and cheese rated high as war foods. And other livestock products, some inedible—fats, fleece, feathers, and hides—likewise were high on the priority list of war needs.

Extension economists aided committees which set up the goals for these and other war products. Once the goals had been established, the economists aided county workers in giving farm families the background they needed—the outlook for equipment and labor, proposed price supports, the needs of this country and its allies. Sometimes a knowledge of the “why” behind a program was as important as the know-how.

Livestock numbers, fortunately, were at record-high levels when the war began, and the trend was toward larger numbers still. But by early 1944 stocks of feed grains accumulated in the 1937–41 period had largely been depleted. Short supplies of feed caused a decline of livestock numbers; nevertheless, farmers and stockmen produced a record output of meat animal products in 1944. Meat alone amounted to 24½ billion pounds, dressed basis.

A great deal of emphasis has been placed on animal health in an effort to raise the largest number of animals to a marketable age. During World War I carcasses of more than 40,000 cattle were condemned annually because of tuberculosis. During the recent war, condemnations by Federal meat inspectors were only about 3 percent of that number. Cattle tick fever took a toll of about 40 million dollars a year a quarter of a century ago; losses are virtually zero now.

Animal Death Losses Decline

These improved animal health conditions are due in part to the success of the cooperative programs conducted by Federal and State authorities, including the Extension Service.

Several million pounds of phenothiazine are being used annually in effectively controlling internal parasites. Calfhood vaccination is supplementing the test-and-slaughter plan for controlling brucellosis of cattle. Further progress is being made in stamping out tuberculosis among cattle, swine, and poultry.

For example, after one State educational meeting, Bourbon County, Ky., reported sales of phenothiazine sufficient to treat 60,000 sheep.

Prior to 1939, a relatively few thousand cattle were treated annually for cattle grubs. By the winter of 1944–45 several million head were being treated. This greatly increased the meat supply, conserved feed, and saved several hundred thousand hides for leather. Texas treated about a million head of cattle for grubs in 1944, and the Kansas total exceeded half a million. The same treatment, a rotenone solution, with the addition of sulfur, is proving effective in control of lice.

Smaller Crews Do Ranch Jobs

Production of livestock has been increased on ranches, with smaller crews, by the improvement of gates, fences, and chutes. More ponds and tanks have also contributed. Equipment such as self-feeders, automatic waterers, cattle squeezes, and vats, was built from plans furnished by extension agricultural engineers.

A variety of other educational activities could be mentioned here. County agricultural agents emphasized rigid culling, selection of quality sires, greater home production of feed, balancing rations, and adjusting livestock numbers in relation to feed.

Pennsylvania's sheep improvement program is representative of progress in this field. A survey among 4,000 farmers showed that the average farmer marketed 70 lambs per 100 ewes; whereas farmers cooperating in wool growers' associations marketed 96 lambs per 100 ewes. If this increase applied to all the State's 330,000 breeding ewes, production of lamb would be increased by more than 7 million pounds a year.

Fleece weights of range sheep in Wyoming have become the highest in the Nation as a result of a similar program. In Texas, where 87 percent of the country's Angora goats are found, mohair grading and marketing are paying dividends.

New Practices Save Pigs

A swine sanitation and management program developed in Illinois a number of years ago has served as a pattern throughout the country. Educational work on this practice alone has gone far to justify the cost of extension work in many of the more important swine-producing counties.

One feature of Kentucky's successful swine-production program is the use of tilted floors in farrowing houses. The slope causes the sow to lie with her head and back up the slope and away from the pig brooder or protecting rail. Losses of young pigs formerly ran 23 percent, but they have been diminished greatly by this practice. Four demonstrators in one Kentucky county report only one pig mashed out of 100 farrowed.

Many areas of the country have profited from extension help given producers in marketing their hogs. Often shipping days and shipping pools are organized by committees, and extension agents play an important part.

Eight-point Dairy Program Is Continued

The wartime dairy extension program emphasized the maximum production of milk. Extension dairymen and county agricultural agents worked closely with the Dairy Industry Committee for the Nation, with State committees, and local representatives of the dairy industry. Together during 1944 they worked on an eight-point program for more milk.

As a result of a broad information and advertising program, more producers were reached than ever before. Extension dairymen considered the results gratifying: Production of more than 119 billion pounds of milk, in spite of serious feed and labor shortages. The production was a billion pounds higher than in 1943 and only a little less than that of 1942, when an all-time high was reached.

A program based on "Efficiency pays" was adopted for 1945, and following it assured the dairyman a sound basis for either wartime or peacetime. The eight points for 1945 were:

1. Grow plenty of high-quality roughage.
2. Balance your herd with your feed supply.
3. Keep production records on each cow in your herd.
4. Practice disease control methods.
5. Produce milk and cream of the highest quality.

6. Adopt labor-saving practices.
7. Take care of your land.
8. Develop a sound breeding program.

By midsummer, trends indicated that the total production for 1945 would surpass that of 1944 and possibly that of 1942.

A great change is taking place in the breeding of dairy cattle. Co-operative bull associations are being replaced by artificial-breeding associations. In bull circles, the ratio is 1 bull to 42 or 45 cows. Artificial insemination means a bull may now sire 500 to 1,000 calves within a year.

The swing to artificial insemination reemphasizes the need for good sires. This step is being promoted by dairy herd-improvement associations, which had more than half a million cows on test during 1944. These represented 21,254 herds. As a result of association tests the transmitting ability of 1,745 sires was proved.

During the war the associations had difficulty finding testers. In Pennsylvania 14 of their testers were women and 57 were conscientious objectors.

Along with educational work on better feeding practices and others of the eight points, extension dairymen, county agricultural and home demonstration agents have promoted quality milk production for home and market.

Poultry, Egg Goals Exceeded

Poultry and egg goals set by the Government have been exceeded each year without cash incentive payments. Five million farmers raise poultry, and extension workers presented the why and how of increased production in their wartime educational programs directed to them.

Increased production comes from commercial poultry raisers, farm flocks, and back-yard poultry flocks. All three are encouraged in efficient production. Results were especially apparent in April 1945, when the rate of lay reached an all-time high for any 1 month—147 eggs per bird.

Poultry types have been improving steadily, too, as a result of the National Poultry Improvement Plan, in which the Extension Service cooperates.

In States where turkeys are produced in quantity, extension poultrymen aided military procurement offices by encouraging growers to get birds ready in advance of the usual season. This was to allow men in uniform overseas and in this country to eat turkey on Thanksgiving and Christmas Days.

The Army further recognized the importance of meat production by issuing certificates of meritorious performance to 4-H Club members who made real contributions to meat supplies. Usually this recognition was given in connection with the "Feed-a-Fighter" movement.

Livestock Gets 4-H Interest

About 660,000 4-H Club boys and girls carried on livestock demonstrations during 1944. Nearly half, 262,649, were interested in poultry, and swine demonstrations ranked second, engaging 194,567. Other demonstrations in the order of enrollment included dairy cattle, beef cattle, sheep, horses and mules, and bees. A few States reported demonstrations with goats, and some with rabbits.

The poultry demonstrations involved more than 10 million birds, including turkeys. Boys and girls worked with 109,690 dairy cattle, 81,511 beef cattle, 98,503 sheep, and 378,948 swine during the year. These were no ordinary animals, as visitors to county, State, and regional livestock shows can testify. Through these shows the public is becoming acquainted with 4-H members' improved methods and the high quality of the things they grow, produce, or conserve.

Expanding Crop Production

From 1939 to 1945 total crop production in this country increased 33 percent. For the same period, the acreage of crops increased only 6½ percent as a result of war stimulation.

Much of this increase was brought about by better cultural methods, better seed, and wiser use of available fertilizers, along with favorable weather. In all these educational movements, extension agronomists and county agricultural agents had a leading part.

On one hand, there was the need for feed, forage, and pasture to sustain and fatten livestock and for oil and fiber crops. On the other, there was the need for wise land use—keeping or returning sub-marginal land to grass or soil-conserving crops.

Producers of all crops, and of livestock, too, needed current economic information as well as physical materials. They had to be kept informed on the supply situation for machinery, fertilizers, insecticides, and containers. They needed to be kept up to date on price supports and subsidies, on goals and marketing services. In these jobs, county workers had the help and support of extension economists.

Certain crops had to be emphasized because of war uses. Flax offers one example, and since many farmers grew it for the first time they needed more than usual help. Soybean and peanut acreages were large, too. Most States met their goals for these crops.

Supplies of certified seed were sufficient in most instances, but legume and grass seeds were exceptions. In the Central States the acreage of red clover saved for seed increased 10 to 50 percent. An acreage payment was offered by the Agricultural Adjustment Agency as an inducement for seed harvest. Production of adapted grass seed is opening up an entirely new industry in the Southwest.

Values of Fertilizer Demonstrated

More and more farmers are realizing that fertilizer plays an important part in profitable crop production. In addition to teaching the value and the correct application of fertilizers, extension workers urged farmers to take advantage of the Agricultural Adjustment Agency program relating to these materials. Extension agronomists in the Southern States worked closely, too, in the soil- and crop-improvement programs of the Tennessee Valley Authority. One farm-unit test demonstrator in West Virginia reported an increase of 2,903 pounds of alfalfa per acre as a result of using fertilizers supplied by the TVA through the efforts of his county agricultural agent.

Cotton—the “Problem Child” Crop

Now a word about the Nation's “problem child” crop—cotton.

The importance of cotton to the Nation, and especially the South, is indicated in these facts: More than half of the Nation's farm population lives in the South. Cotton is the most important cash crop in

the region, since it accounts for nearly a third of the South's total farm income. About one-half of the South's 3 million farm families grow cotton.

Extension from its beginnings has given much attention to cotton. But with the economy of the South in a period of transition Extension is concentrating on an intensified program concerned with the production, ginning, and marketing of cotton. Other agencies are concerned with research, foreign and domestic cotton policies, manufacturing, and distribution of the crop.

The Extension cotton program for farmers is:

1. Fit cotton into balanced farming.
2. Get together on the best variety.
3. Take care of your soil.
4. Make your labor count.
5. Control insects and diseases.
6. Pick and gin for high grade.
7. Sell for grade and staple value.

Already the ginning program has been given momentum by the addition of three Federal cotton-ginning specialists with field offices in the Southern States. They have prepared leaflets and posters for ginners and articles for trade publications. During 1945 they planned to visit 1,500 gins in the interest of better ginning equipment and methods.

Here is one of many instances of what this new service means: In 1944 Extension's cotton grade improvement program aided an Alledale, S. C., ginner in correcting some operative difficulties in his plant. This reduced his rough preparation and improved the quality of 408 bales one whole grade. This single change meant an increase of \$2,652 in the cotton income of his patrons.

Yield Goes Up as Acres Decrease

For the last decade, cotton acreage has been on the decline. Several States, notably Alabama and Georgia, reported in 1944 the lowest acreage since 1871. On the other hand, lint yield per acre is showing encouraging gains as farmers apply better production methods. Alabama's yield per acre has risen from 137 pounds during the 10-year period 1867-76 to 248 pounds for the 10 years 1935-44. Mississippi reported a record high lint yield of 411 pounds per acre in 1944.

The one-variety movement has been a factor in this increase. Farmers have been encouraged to plant varieties that produce the greatest yield per acre and offer the best spinning performance. By growing a single variety in a community farmers can get higher prices and supply the uniform cotton the mills require.

Then, through the cotton-planting seed improvement program, good seed has been available. In Mississippi, three practices alone meant an increased cotton income of more than 14 million dollars. These practices were the planting of breeder seed, seed treatment, and use of the Government's free classing. The extra income resulting from the cotton-improvement program in Georgia in 1944 is estimated at \$20,432,000.

These figures indicate the possibilities of a vigorous farm program for the South which takes cotton into account.

Problems are by no means limited to cotton. Potato blight hit the upper Mississippi Valley States in 1944. Chemicals were obtained

quickly for spraying, and in some instances growers resorted to airplane dusting. A blight warning service proved so successful that extension plant-disease specialists followed the same method along the Atlantic Coast in keeping one another posted on the progress of blue mold of tobacco.

Fighting Chinch Bugs Saves 13 Million

Grasshoppers, chinch bugs, and other pests had to be combated, too. About 5 million acres of crops worth \$23,000,000 were protected from grasshoppers by baiting during 1944 in the control program carried on cooperatively by the Extension Service and the Bureau of Entomology and Plant Quarantine. Grasshoppers were not generally so destructive as in previous years, although the value of crops they destroyed was estimated at about \$13,500,000. A similar program for the control of chinch bugs saved farmers crops worth \$13,000,000.

For the third year, 4-H Club members in several of the cotton-producing States served as insect reporters. Their weekly records aided in efficient distribution of the necessary insecticides.

4-H Club boys and girls carried on more production demonstrations with corn than with any other crop. Nearly 100,000 of them grew 163,647 acres following recommended practices. The aggregate acreage of demonstration crops grown by 4-H Club members in 1944 was about 400,000, including corn, cereals, peanuts, soybeans, potatoes, cotton, tobacco, and truck crops. In these projects 286,066 4-H members were enrolled.

Three other factors are outstanding in the year's production achievement: Treatment of seed, increased efficiency through better use of machinery and fertilizer, and finally, the slower but encouraging benefits of soil improvement.

Farmer demonstrations in Virginia and the Carolinas showed that peanut seed treatment increased stands of plants by 28 to 54 percent. Treating pea seed in Pennsylvania during the past 4 years has resulted in an average increase in yield of 546 pounds of shelled peas per acre.

Throughout the Nation county agricultural agents were active in organizing or aiding State seed-improvement associations. And they helped farmers in the control of noxious weeds.

Mechanization Aids Production

Many of these crop-production jobs ordinarily are done by hand, but ingenuity reduced the amount of this slow, toilsome work. Tractors, motors, and machines were substituted for hand labor in cutting and planting potatoes, setting sweetpotato, tobacco, and vegetable plants, chopping and thinning cotton and beets, and in a variety of other tasks.

The Extension Service promoted this work by designing equipment and by distributing its own and farmers' plans for building labor-saving devices. Farm magazines cooperated by publishing pictures and plans of many of these pieces of equipment.

Problems Beset Truck Growers

Commercial truck growers faced much the same problems that beset victory gardeners in 1945, but their problems were magnified, as weather, supplies, and labor affected their livelihood.

Like other war years, 1944 and 1945 brought the opening of new acreages. In Pennsylvania the acreage of commercial fresh vegetables expanded 18 percent over prewar figures. In Louisiana, Extension supervised the production of foundation vegetable seed particularly adapted to the State. Seed and plants were valued at more than \$37,650.

Vegetable-seed-treating clinics proved popular. At New York clinics, seed companies, canners, and growers cooperated in treating seed to plant more than 130,000 acres to melons, cucumbers, tomatoes, cauliflower, cabbage, and peas.

Spray Rings Served Many

The war years have proved that custom spraying or cooperative sharing of spray equipment brings the best service to the smaller farmer at low cost. Cooperative spray rings are well established in Pennsylvania where 100 were operated last year. These sprayed 16,148 acres on 2,324 farms in 18 counties. Had there been one sprayer on each farm, 2,000 tons more steel and 4,000 tons more rubber would have been required to do the same job.

In fruit as well as vegetable production spray services meant better quality as well as more quantity. And short cuts in production were introduced to save time and labor. Machines were devised for speeding up tomato picking. Pecans and other nuts were harvested with tractor attachments instead of hand threshing.

Timber was a war crop, and often a farm crop as well, for farmers own one-third of the commercial timber acreage of the United States. It is an important asset on 3½ million farms.

Numerous agencies, including the War Production Board and the State and U. S. Forest Services, carried on production campaigns to keep mills supplied with raw materials. Extension's job was to help farmers market their forest products in ways and amounts that would keep stands in a productive condition. Usually this involved aid in reforestation.

Forest Products Go to War

North Carolina county agricultural agents helped 2,902 farmers market timber products valued at \$1,657,276. They estimated that 90 percent of this timber went into war-need channels.

Emergency programs were developed in several States. In Texas the Extension Service aided farmers in the salvage of ice-damaged timber. Massachusetts workers cooperated with the War Department in salvaging timber damaged by a hurricane. The Wisconsin Extension Service developed logging rings patterned after harvesting rings to get farm timber to concentration yards, where the logs were sold at auction, resulting in larger returns to farmers.

Pulpwood and naval stores also received attention. In New Hampshire the Extension Service aided in setting up a farm cooperative group to buy and handle farm pulpwood. In one Michigan county, the extension forester reported, farm-produced pulpwood was stepped up from 800 cords to 11,000 cords in 1 year.

4-H Club members are showing promising interest in forestry. Both South Carolina and New Hampshire boys carried on outstanding demonstrations in the production of pulpwood, fuel wood, and excelsior.

On Feeding Families

Not every family in the Nation could lend a hand to meet the farm labor shortage or produce crops and livestock on a commercial basis. But most of them could and did make some contribution to their own food supplies.

Extension agents aided 2,523,028 families in a broad home-food-supply undertaking. With rural families this usually meant (1) growing a victory garden to furnish vegetables for use fresh and for preservation; (2) producing adapted fruits; (3) keeping at least a cow or two to provide milk, butter, and cheese; (4) keeping a poultry flock for meat and eggs; and (5) raising meat animals for a meat and lard supply.

Town and city people were encouraged especially in growing victory gardens. And where fruit production, back-yard poultry flocks, and rabbit raising seemed practical, workers were ready to give help. In this undertaking and in food preservation, county extension agents had the valuable assistance of 1,667 emergency war food assistants. Of these, 699 were agricultural workers and 998 in home demonstration work. In the South especially, many were Negroes employed to give increased service to their own people.

Weather and psychology had a great deal to do with the average home food supply in 1945, especially with victory gardening.

Here is a program that caught the imagination of the people early in the war. Many who never had produced as much as a radish for their own tables became enthusiastic gardeners. And, though gardening is an enterprise of success mixed with failure, the great mass of gardeners have remained loyal.

Gardening in 1945

Primarily because of the weather, the prospects for garden production in 1945 were uncertain as late as June. In much of the country a mild, early spring had been followed by a cold, damp season lasting far beyond usual planting times. Brisk seed sales took a nose dive; delay in planting often resulted in spindly or unthrifty vegetable plants.

But, with more favorable weather, victory gardens began a comeback. Indiana, for example, reported 4 or 5 percent more gardens than in 1944. In Alaska, where old-timers and natives have not always considered gardening profitable, interest in gardening has increased as settlers bought homes and as natives acquired a liking for garden crops.

More Than 18 Million Gardens in 1944

There are no question marks about 1944 results. There were 18.4 million gardens in the Nation—better gardens than before, and in many instances bigger gardens. More than half of the households in the United States had home gardens. The proportion having gardens was highest in the rural areas, both among farm and nonfarm families. Forty percent of the fresh vegetables eaten in this country last year came from home gardens.

4-H Club members grew 141,261 acres of victory gardens and vegetables in 1944. In fact, since Pearl Harbor they have contributed the produce from 800,000 acres to the world's nutritional security. These are not ordinary gardens. Club members learn early in their garden-

ing experience to control insects, to combat drought by keeping down weeds, to save fertility and reduce erosion by planting on the contour, to select the adapted crops and varieties. They have learned, too, that rotation and succession planting keep a garden busy and productive.

Probably no educational program of the Extension Service touched more people in 1944 than the garden movement. Low-income families found their gardens saved money, and well-to-do families found gardening insured constant and sufficient supplies of vegetables. Both groups found gardens enjoyable as well as profitable.

Practices Improved

The improvement in the quality of gardens in 1945 was not an accident. County, State, and Federal workers urged seed treatment, insect control, and other practices related to garden success. Newspapers, magazines, and radio stations again generously contributed space or time.

A great deal of behind-the-scenes work goes on in preparation for a program this big. Extension specialists work with dealers and growers who furnish seed, plants, fungicides, insecticides, sprayers, and dusters. Entomologists usually take the lead in making inventories of insecticides and assuring their best distribution. In the war years there was the added responsibility of acquainting both dealers and gardeners with substitute insecticides, when the more familiar remedies disappeared from the market.

And, incidentally, one hidden value of the victory garden is that it has taught many novices there is much more involved in producing food than mere planting and harvesting.

Fruit Plantings Continue

High ration-point values of canned fruit stimulated increased home fruit production where it was practicable. Fruits that can be grown without too much spraying were emphasized in the victory-garden program. These include strawberries, bush fruits, grapes, and a few tree fruits.

Wisconsin reports show this trend. More than a thousand families in 54 counties cooperatively obtained 12,633 fruit trees, 18,256 raspberry bushes, 39,025 strawberry plants, and 1,164 grapevines last year.

Along with wartime incentives, the Extension live-at-home doctrine continued to win new converts. In Kansas 25,000 young trees were planted, and North Carolina's "Fruit for Home Use" program influenced nearly 3,000 families to purchase cooperatively about 119,000 fruit plants.

About 23,000 4-H Club members conducted fruit demonstrations in 1944. As a result many youths can educate their own parents on the how and when of spraying and pruning. Some are trained in the arts of budding and grafting as well.

Farm Flocks Supply Family Tables

Farm flocks of 500 birds and less produce the bulk of poultry products in this country. Their prevalence reinforces the average farm family's home food supply of meat and eggs. Fortunately, only a few farm families have not seen the wisdom of keeping and raising chickens.

The number of chickens hatched during the spring months of 1945 exceeded the goals and also the 1944 production. These facts pointed to an improved farm home food supply as well as to greater quantities for market.

Town people turned to back-yard poultry flocks early in the war, and hatchery reports indicate a large number of these small flocks are being maintained.

In 4-H poultry programs, the emphasis usually is on the family-sized flock. Many club boys and girls have taken over the handling and management of the family poultry program. Training in culling and dusting was given at Michigan community and county schools and resulted in more efficient production, not to mention saving of feed supplies.

County extension agents were called on for more information on feeding, for help with pest and disease control, and for assistance with home-made poultry equipment. Pricing systems and some local seasonal surpluses also resulted in more emphasis on quality, marketing, and consumer education.

Farm Family Need Not Lack Meats

One of the advantages of living on the farm is the opportunity to protect the family dinner table from the ups and downs of economic cycles. Whatever the cash income, people with home-grown food need not go hungry, come war or peace.

So safer, cheaper, more satisfactory ways of growing and preserving a home food supply have always constituted a red-letter extension program. And meat is an important element of that supply.

Persuading the farm family to budget its yearly meat needs has been the first step in the extension meat program. Then the family has been helped in planning to produce the number of meat animals required in the budget and in feeding them. Next, the family has learned the amount of kitchen-ready meat that can be expected from a given weight of live cattle, hogs, and lambs. This information has been distributed in hundreds of thousands of leaflets by State and county offices.

At training schools men, women, and youths have learned efficient ways of dressing and cutting up carcasses from animals slaughtered for family meat. They have learned cleanliness and spoilage prevention as well. There has been added emphasis on the best use of all parts of the carcass and on the salvaging of inedible fats for war collections.

Family Cow Is a "Must" on the Farm

If the farm family has enough milk and dairy products, generally they must be produced on the farm. Therefore, many farm families were led to buy family cows. They got help, too, in the care and feeding of cows and in preparing high quality dairy products. Reports from county home demonstration agents show that more farm homemakers are making their own cheese and butter than before the war, and therefore, are asking for more assistance on this subject.

Many 4-H Club members have taken over family dairy herds because of the labor shortage. To enable them to get credit for this work, the national plan for the 4-H dairy program has been adapted.

Preserved Food Counted in Billions Now

About 3½ billion quarts of fruits and vegetables were preserved at home during 1944, a national survey by the Bureau of Agricultural Economics showed. Most of this food was canned. Other foods, including poultry, meats, and vegetables, were cured, canned, frozen, or stored fresh, but no one knows how much.

Farm families conserved about 40 percent of the total quantity. The remainder was conserved by urban families who received help and encouragement from emergency extension workers. Ninety-four percent of farm households and 65 percent of urban families preserved fruits and vegetables.

4-H Club members reported canning 23,693,994 quarts during the year. Of the 350,442 members reporting food preservation, nearly 5,000 were boys. Thousands of girls throughout the country have learned to can successfully before reaching their teens, because of the 4-H program.

Negro homemakers, young and old, have responded well. One Negro county extension agent reported: "Our farmers have their pantries and smokehouses filled with canned fruits, vegetables, sweet-potatoes, and meat.

In all, extension workers assisted 2,523,028 families in preserving foods to meet their needs for the unproductive months. Workers in Missouri aided one-third of the farm families with this work.

Long- and Short-Time Trends Given

There are definite trends in food preservation, some temporary and some long-time. One temporary trend is the increased interest in home dehydration of fruits, which in part is traceable to the sugar shortage. Wartime rationing, too, is probably responsible for an increased interest in cheese making.

Home preservation of fish—by canning, smoking, and salting—also is gaining in popularity. Florida home demonstration agents were given workshop training on home preservation of fish. The Fish and Wildlife Service cooperated in this training program.

But the primary long-time trend is toward more freezing of foods, with a proportionate decrease in canning.

Freezing Boom Predicted

Almost 2 million families are patronizing the 6,000 frozen-food locker plants in 48 States, and the number of lockers is on the increase, particularly in the South. When manufacture of home-size freezing cabinets is resumed, these will find growing favor with farm families, extension workers believe.

Now about meat. Extension has recommended canning, curing, and freezing methods in line with research. Material on these three methods is being requested and distributed in an increasing volume. For example, more than 400,000 copies of a leaflet, *Curing Pork—Country Style*, AWI-108, were requested the first year it was printed.

Equipment Problems Were Met

Of course, there were difficulties to be overcome. Pressure canners have been bought as rapidly as they reached the market, but there were not enough to meet the needs. Many canners and sealers were worn out or in need of adjustment.

To meet the first problem, sharing of equipment was encouraged. Likewise, community canning centers were helpful in enabling more

families to preserve food. In many instances these were established by vocational agriculture departments, and Extension's contribution was to aid in training supervisors and people using these centers.

To meet the second problem, equipment "clinics" were held in almost every State. In Alabama 53,000 persons attended a series of clinics at which 8,389 cookers were tested. Extension agricultural engineers aided in equipment testing and repair, and proper precautions were given extra emphasis in the farm-safety program.

Another type of clinic was aimed at improving the quality of home-preserved food. This was the "spoilage clinic," at which homemakers learned to recognize the appearance and smell of spoiled foods, plus some of the whys of spoilage. But primarily they learned how to avoid loss and achieve high quality.

More Families Are Reached

Many new educational and promotional devices were used by extension workers in reaching more people with information on food preservation. "Kitchen demonstrations" were given in neighborhoods not previously reached. Canning clinics in grocery stores and city produce markets drew attention. Other help was given through school lunch-rooms, welfare offices, war housing and civic centers.

In this as in other programs, the contribution of the paid extension worker was multiplied by the efforts of voluntary leaders. In Maine neighborhood leaders assisted with preservation demonstrations throughout the State. On the Hawaiian Islands they demonstrated the bottling of guava juice and the preserving of mangoes and guavas.

Public Likes Oversea Program

One other food preservation program was especially dear to the heart of the public: Canning food for men overseas. County home demonstration agents have been deluged with requests for recipes for canning foods not usually canned, and for instructions on packing delicacies. As a result, servicemen all over the world have had their favorite foods prepared by safe methods and delivered in good condition.

The work was done in community centers, homes, church basements, and courthouses. This example is typical: At Christmastime 31 boys from a neighborhood in Carroll County, Ind., received boxes packed with a can of chicken, a can of fruit cake, popcorn, and best wishes from the folks at home.

Research done by the Bureau of Human Nutrition and Home Economics and the various agricultural experiment stations is a foundation stone of the extension food preservation program. The Bureau's publications are an added contribution. They are well illustrated and readable. Four hundred thousand copies of a leaflet on home canning of fruits and vegetables have been distributed, and another on home canning of meat has passed the half million mark.

Helping With Other War Programs

In this report various references have been made to special or emergency programs in which extension workers cooperated: Salvaging hurricane- or ice-damaged timber; pushing conservation or consumption of products in temporary surplus, such as eggs and peaches; saving perishable crops when labor shortages developed. Before censorship controls were lifted, Extension cooperated with the Weather

Bureau in broadcasting weather "advisories" of aid to farmers throughout the country. Some sections still continue a modified version of this service.

But there were numerous other war programs that claimed the attention of extension workers, such as rationing of sugar for home canning, sale of war bonds, and fat salvage. These required time, often beyond office hours. Because of their positions of leadership, county extension agents were called on for advice and support in these activities. They responded patriotically, meanwhile carrying a full extension load.

The War Food Administration took over the fat salvage program in October 1944, increasing Extension's educational responsibility in this regard. In December 1944 rural collections amounted to 725,735 pounds. During the spring of 1945 the collections rose to an average of about 1,150,000 pounds a month.

4-H members continue to be active in citizenship and war-service programs. Since Pearl Harbor their scrap collections have exceeded 300 million pounds. And their total of war bonds and stamps purchased or sold since December 1941 exceeds \$140,000,000. 4-H purchases and sales of bonds during 1944 amounted to \$61,457,907. The national 4-H war bond goal for 1945 was \$53,000,000, while Georgia members had a war bond goal of \$9,000,000.

One phase of the wartime extension poultry program was the conservation of more feathers for use in arctic sleeping bags and hospital pillows.

A program requiring considerably more time on the part of county agricultural agents related to military deferment of men in agriculture. During the year the Extension Service supplied information concerning more than 1,200,000 agricultural workers for use by Selective Service boards.

Supplying a counseling service for veterans seeking an opportunity on the land is one of the newer extension enterprises. By the fall of 1944 all States had reported establishing veteran advisory committees. Eleven thousand farm men and women constituted these groups. Usually the county agricultural agent serves as secretary for the committee.

The committees are prepared to give veterans friendly counsel on types of farming adapted to the county, reasonable land values, sources of credit, safe margins of indebtedness, and similar subjects. They have no part in financial transactions or approval of loans.

Most State extension services have published literature designed to aid the veteran and protect him from schemes and hazards in land transactions.

Demobilization of military personnel did not get under way extensively until late in 1944. During 1945, however, veterans were beginning to return to farms and ranches in considerable number. No record for the Nation as a whole is available, but Louisiana reported that 3,017 of its veterans had returned to agriculture during 1944. Of this number, 563 had sought the counseling service of agents or advisory committees.

In Jefferson County, Colo., home demonstration club members surveyed the postwar plans of their sons in service and then obtained promises of jobs for them within the county. Many other leader

groups throughout the country made similar surveys and offered local assistance.

These in brief are some of the war jobs which Extension undertook or assisted with in this war year.

THE WELFARE OF THE PEOPLE COMES FIRST

On Being Well Fed

Eating is a universal habit, necessary but pleasurable. But eating right is far from universal. And one of Extension's jobs is to help people eat right.

In wartime the nutrition job was difficult. There were shortages of many of our valuable and accustomed foods. People had to work harder and more irregular hours. Costs of food rose. As a consequence many persons in country and city obtained insufficient protective foods to meet the needs of the body. Foods most often missing or insufficient were milk, vegetables, fruit, and whole-grain products. Meat shortages were serious in many areas.

The chief objectives of the extension wartime nutrition program were: (1) To keep families physically fit through improved food habits and good diets, (2) to assist rural and urban families in meeting their own food needs by planned production and preservation, (3) to use available foods to the best advantage, by good meal planning and proper preparation, and (4) to cooperate wholeheartedly in Government war measures such as food rationing, price control, and campaigns against waste.

In this program Extension had the interest and support of more than a million home demonstration clubwomen and of 4-H Club members, both boys and girls. Furthermore, 111,300 trained leaders were of special assistance. What was done? Here is the answer: 1,740,405 families were assisted in improving diets; 1,363,888 families, with food preparation; 179,507 families, with child-feeding problems; and 406,345 families, in building up stronger resistance to colds and other common diseases through proper diet and invalid feeding.

Nutrition Committees Were Aided

Extension workers did not restrict their energies to their own program. One extension director and several State home demonstration agents and extension nutritionists served as chairmen of State committees; others headed or worked on subcommittees. County home demonstration agents were key members in local committees because of their experience in program planning and their understanding of county conditions.

Extension was represented at educational nutrition clinics conducted in 23 States by Public Health Service personnel, who pointed out observable characteristics of milk or moderate nutritional deficiency disease such as scurvy, pellagra, vitamin A and B shortages, anemia, rickets, beriberi, goiter, and hookworm. State nutrition committees and State departments of health sponsored these clinics, and the Extension Service aided in the educational follow-up work.

In further cooperation with State committees, home demonstration workers have carried on educational work concerning the enrichment of certain basic foods. Eighteen States now have passed legislation requiring enrichment of all white bread and flour, and five Southern States have provided legally for the enrichment of corn meal.

Among the other national nutrition programs in which Extension played a part were: "Eat a good breakfast to start a good day"; "Pack a lunch that packs a punch"; proper preparation and use of variety meats and utility beef; use of locally or seasonally abundant foods; promotion of the school-lunch program.

Publications Widely Used

Probably no contribution of the Extension Service to improved nutrition was more far reaching or significant than its publications. Timely and standard circulars and leaflets on many subjects related to foods were used in teaching and distributed by workers. Some originated in Washington, but most were prepared and published in the States for rural and urban homemakers.

Maine issued some special dietary suggestions for blood donors. Michigan, North Dakota, and Texas issued materials in Spanish for Latin-American families, both migrant and resident.

Because of the needs of city and town women, emergency war food assistants and many home demonstration agents gave them special help with meal planning, food preparation and conservation, and rationing problems. Sometimes this was done through talks or community centers. Michigan reported kitchen meetings, and all States relied on newspaper articles, radio programs, and home visits, and talks to groups to reach the greatest number of families. Wall charts, food exhibits, and canteens contributed to nutrition education.

Work simplification, mentioned elsewhere in this report, helped in the kitchen. Square biscuits and cookies made their appearance, and timesavers such as planning ahead, oven and buffet meals, emergency shelves, and short cuts in dishwashing found favor.

Reports of county home demonstration agents indicate the problems that beset the wartime meal planner. They gave aid on the use of sugar substitutes in both food preparation and preservation. They gave more emphasis to preparing game and fish as meat supplies dwindled. They helped introduce green and dried soybeans and soya products to new consumers.

School-Lunch Program Is Supported

During the war years, lunches prepared at school were an important part of the national nutrition program. County home demonstration agents and emergency war food assistants explained the school-lunch subsidy program to local groups, encouraged home demonstration clubs and other groups to assume local sponsorship of the program, promoted school-lunch canning by giving demonstrations, and counseled on a variety of other subjects.

A number of States have 4-H hot-lunch clubs. Their members, under the guidance of leaders, help to plan, prepare, and serve hot lunches in rural schools. The Jerome 4-H Club in Drew County, Ark., for example, has sponsored the program for 4 years. Members serve a complete meal every school day to 130 students and 5 teachers. One home demonstration club member usually assists.

Missouri county home demonstration agents assisted 528 schools in 58 counties in maintaining hot school lunches. Throughout the country home demonstration clubs sponsored benefits to finance or equip lunchrooms.

During 1944, 367,700 4-H Club boys and girls did some work in food selection and preparation. Of these, 6,565 were boys. In most

States girls, and sometimes boys, scored themselves on food habits. Many of them enrolled in health contests, which helped them improve food habits and posture and correct physical defects. Idaho 4-H Club members have a program based on "Learn about your health in everyday living and do something about it."

On Staying Healthy

Large crops of babies marked the war years. They increased the need for help with child care and feeding. Assistance was given in a wide variety of ways, from Georgia infants' "cod-liver oil clubs" to the "well baby clinics" of Arkansas and Alabama.

Thus far, only a few States have employed extension health specialists, but all home demonstration workers take an active part in education to protect individual and public health. Home demonstration groups are cooperating with health authorities in urging immunization against typhoid, diphtheria, whooping cough, and smallpox. A Negro agent in North Carolina reported 322 families immunized in 1944. Much was done to protect home water supplies, to promote sanitation, to screen homes from mosquitoes and flies, and to campaign against rats.

Home care of the sick and first aid were studied by 266,950 homemakers in 1944. Both activities received added emphasis in localities where doctors were scarce. In some communities sickroom equipment and loan chests were put in convenient places for use by families. During the winter months, neighborhood leaders held 32 meetings on simple practices in home care of the sick in one northern Maine county. Puerto Rico reported 34 health meetings attended by 2,013 people.

Better nutrition and health were advanced during the year by more than half a million volunteer leaders. In Weld County, Colo., these leaders were instrumental in providing low-cost hospitalization for rural families. Throughout the country, cooperative hospitals and demonstrations in group medical care and health insurance gave rural people visions of what they could provide for themselves in the years ahead.

Along with promoting measures for improving rural health, the cooperative Extension Service pushed the home safety program. And with good reason, for in one recent year farm people were involved in 11½ million accidents. This represented a loss of about 25 million man-days—labor sufficient to produce this Nation's wheat crop in normal times. So important is this work that some States have added safety specialists.

Boys and girls took the lead in discovering and removing many hazards around the home. Cellar steps and stair rails were repaired, icy steps sanded, and flammable petroleum products were handled more safely. In all, 385,118 4-H Club members received some training in accident prevention. They helped more than 700,000 families remove accident hazards.

Avoiding Hazards to Mental Health

There are mental hazards as well as physical hazards to overcome. War aggravates these, for it means separation, maladjustments, anxieties. Take the case of the South Dakota farm woman whose four married daughters had returned home with a total of seven preschool children. She sought aid from the county home demonstration agent with family-life problems.

Sometimes a community's need was for recreation. Alabama provided "game libraries"; some Texas counties arranged recreation centers. In Georgia librarians aided in stimulating widespread reading programs.

Good housing, modern equipment, and larger incomes may provide an easier road to family happiness and well-being. But many rural families have to rear their children without them. Fortunately, family life and personality development don't depend on living standards, so extension groups have the job of teaching sound principles regardless of a family's level of living. The ways to healthful living still hold good. And the ultimate goals of self-sufficiency, character, and citizenship remain constant. Family life relations specialists are available in most States to consult on these subjects.

At least one State has an extension pastor who works with preachers in the interest of the religious lives of rural people.

About the Farmhouse and Its Surroundings

The farmhouse frequently was a war casualty. Its first aid usually came in the form of new roofing and minor repairs which helped prevent rapid deterioration and permanent damage.

Rearrangement generally was not costly in materials or time, but it reduced fatigue and often provided greater convenience. One Arkansas woman admitted, "I was about to walk myself to death in my old kitchen. My new sink and arrangement save me hundreds of steps every day."

Many farm women did the rearranging themselves, and frequently they did a large part of the work.

The family washing and ironing can usually be done more easily. County home demonstration agents taught simplified ways of doing laundry, hanging out clothes, and arranging equipment. Laundry carts and outdoor washpots got special attention in the South. In North Carolina both 4-H Club members and women profited from demonstrations of short cuts in laundry. One woman ruefully remarked: "I broke my back over a washboard, and the money I have spent on doctor bills and medicine would have put water in our house several times."

Utility rooms are going to be a "must" in the postwar farmhouse, judging by the interest shown. The utility room includes centers for sewing and laundering, for recreation, and for a variety of other family activities.

On the farmstead, landscaping of home grounds included rearrangement of roads, walks, and fences. Ornamental trees and shrubs were planted, and in some sections new windbreaks were established. In each case the objective was to make the farmstead more attractive, more healthful, and more convenient.

Homes and service buildings often had to be protected from rodents, weevils, and other pests. Likewise, nature's hazards quickened interest in preservative treatment of lumber and fence posts to prevent insect damage and decay.

Throughout the country there was growing interest in slip-covering, reupholstering, and repairing furniture during the war. This was a major activity in Arkansas, where 34,566 families refinished or restyled 166,160 articles of home furnishing.

On Being Well Clothed

Scarcity of essential low- and medium-priced clothing and textiles beset both rural and urban homemakers during the year. And what little they found to buy was of poor quality. That pretty well reduced the extension clothing program to such fundamentals as remodeling, care of clothing, and home sewing of new garments.

Remodeling old clothes ranked highest in the amount of savings to farm families. It meant more than \$300,000 in Alabama. About 700,000 families were reached with this demonstration alone. Twenty States reported giving help on care of clothing to more than a million families.

Clothing exchanges proved popular in South Dakota. These neighborly "swappings" made through home demonstration clubs kept 14,942 garments in use. Usually children's clothing was in greatest demand. Farm families participated willingly and generously in donations to relieve clothing shortages in war-torn countries.

To some families "better storage" means a place for everything. To others it may mean longer life for clothes through protection from household insects, pests, and mildew. Texas reported 4,668 new clothes closets built and 5,473 remodeled during 1944.

To many women who have sewed for years, the interior of a sewing machine is an intricate mystery. But several hundred thousand don't feel that way any more. At sewing-machine "clinics" in 23 States, 266,765 machines were cleaned and repaired. A Maine woman was so much pleased with an old machine she cleaned for a neighbor, that she bought it. County home demonstration agents in 23 States estimate this program saved farm families about 1 $\frac{1}{3}$ million dollars last year.

Teaching women how to sew was managed largely through trained leaders. In Massachusetts homemakers asked to be clothing project leaders. A leader in Vermont voluntarily set up a sewing center where she could be of more help to her community. Tailoring and sewing schools were reported from Oregon to Massachusetts.

Farm families spend comparatively little for clothing. The average spent per family member ranges from \$14 to \$65, depending on the State. Knowing this, county home demonstration agents concentrated on wise consumer buying.

Despite their many wartime duties in the home and around the farmstead, many farm women assisted with Red Cross sewing and knitting. They did the job well and they got a great thrill out of it, clothing specialists reported.

WE ARE PROTECTING OUR HERITAGE

On Conserving Soil and Water

When it comes to land, someone has pointed out, we are conveyed only "the right to use—with the right to use goes the duty to conserve." Most farmers have long been aware of this stewardship, and with the help of a number of agencies, including the Cooperative Extension Service, they are learning and applying measures that will conserve soil and water.

By the end of 1944 there were 256,835 farms carrying out a conservation program according to plans set up by farmers with the co-

operation of soil conservation districts, the Soil Conservation Service, Extension Service, and other agencies. Of these plans, 56,916 were prepared last year.

Soil conservation districts offer opportunities for farmers to take the initiative in planning to meet their own needs. And they may call on Government agencies for technical assistance. At present, 47 States have laws enabling them to set up soil conservation districts. Such districts now total more than 1,350, embracing more than 700 million acres on $3\frac{1}{3}$ million farms.

Before these were organized the Extension Service was active in background educational work. Now Extension agents help district supervisors and other personnel with continuing educational programs. Farmers in several hundred additional areas are now in the process of forming soil conservation districts.

Both fields and pastures are receiving conservation and soil-improvement treatments. Farmers and ranchmen are applying lime and fertilizers, planting legumes and grasses and cover crops, following rotation systems, and turning under green manure. In some sections they use strip cropping, build terraces, and construct irrigation or drainage ditches. Contour ridging and contour farming are on the increase. Despite the war difficulties, more farm ponds and tanks are being dug. Trees and shrubs planted to protect erosive lands provide food and shelter for wildlife and furnish needed products for the farm family. Clearing of brush and noxious plants on pasture and range land continues.

Pennsylvania reports 1,668 soil erosion control demonstrations. The year 1944 was the biggest terracing year in Missouri's history.

In the main, these practices are included in the AAA program, which gives farmers added incentives. The Extension Service, however, conducts the general educational work with regard to all these practices. To lead in this work one or more extension soil conservationists are employed in 34 States and Puerto Rico.

Conservation Increases Production

No one can evaluate the contribution of soil and water conservation measures to increased farm production during the war. There are many farms, however, whose production was increased from 20 to 30 percent by conservation farming within a few years.

The current interest in soil conservation is indicated by the fact that 94 percent of all county agricultural agents reported conducting this work in 1944. Demonstrations were located in nearly 38,000 communities. The effects of this program were multiplied by about 73,000 local leaders.

Fortunately, young people are showing increasing interest in saving soil resources for tomorrow. They learn much about conservation in the usual crop demonstrations, but in addition, 5,316 boys and girls conducted soil conservation and pasture improvement demonstrations. These embraced about 58,000 acres. Forty States accepted the national soil conservation contests for 4-H members, and 28 States competed in the final judging.

Replenishing Forests, Sheltering Wildlife

Sound forestry and wildlife conservation offer additional means of protecting our heritage. Much of Extension's wildlife work is done

in cooperation with the Fish and Wildlife Service of the Department of the Interior. In some States hunting and fishing leases constitute a considerable part of farmers' and ranchmen's incomes. Alabama and several other Southern States have taken the lead in stocking and fertilizing fishponds. This has materially added to the meat supply of those regions.

Many 4-H Club members were given training in rifle shooting, taxidermy, stocking of fishponds, protection of game, and trapping or shooting of predatory animals. Although this type of 4-H training was by no means universal, 30,149 club members profited from wildlife and nature study in 1944.

In the Prairie and Plains States, farmers have continued to establish new windbreaks and shelterbelts about the farmstead and through fields. Both have increased production of home gardens, field crops, and poultry. Take the case of the Utah farmer who 6 years ago planted a two-row windbreak of black locusts and Russian olive, with the assistance of the State extension forester. Recently, during a serious hailstorm, 2,000 of his 2,700 turkeys sought the windbreak for shelter. The 700 that did not reach the windbreak died. The farmer said: "My tree windbreak, which cost me only a few dollars, saved me \$8,000."

Reforestation of farm woodlands is of major Extension concern, especially as forests are depleted by war needs. 4-H forestry demonstrations were conducted on 33,016 acres last year. And both 4-H and other civic-minded groups are establishing "living memorials," which in some instances are community parks or forests.

On Preserving Human Resources

Rural handicrafts provide another part of our heritage well worth preserving. The extension crafts program is not based on art for art's sake alone. Extension home industries specialists continually assist artisans and craftsmen in producing articles for practical use in the home. In many instances, the sale of home-constructed articles supplements the family's income. Creative activities reveal inherited talents, relax tense nerves, and provide recreation. And further, these handicrafts add beauty and comfort to rural homes.

The armed services have long recognized the value of handicrafts in rehabilitatiton programs; so, as more veterans return to the land Extension can expect increased interest among men, as well as women, in fashioning articles of beauty which reflect our national, regional, and local cultures. Trained members of extension groups have volunteered their services in assisting with the Red Cross program of crafts in many of the veterans' hospitals.

Conservation and development of human resources is more difficult in war years. To combat the maladjustments of wartime, the Extension Service strengthened its work on hand skills, family life education, recreation, and rural health education.

RURAL FOLKS HELP THEMSELVES—AND ONE ANOTHER

Leadership Is Indispensable

One county extension worker to every 8,260 rural people—that is about the present ratio. It represents a teaching load which could not be met without the help of volunteer leaders.

Leadership, however, must be selected and trained, and naturally this requires a good deal of the agents' time. Extension's million voluntary leaders include men, women, and older boys and girls doing a variety of jobs for their community. Many conduct demonstrations on their own farms and in their own homes, sharing their training and experience with others. Some serve as sponsors of 4-H Clubs. Others give demonstrations of improved methods or serve as members of planning and advisory committees. Some make surveys, help with tours and exhibits, or direct recreation.

During the war period, between 600,000 and 700,000 additional persons became neighborhood leaders. Their job was to deliver information on production and other wartime activities in the quickest possible way to people in their own vicinity.

On the Island of Oahu, Hawaiian farmers unable to travel to the office of the extension agent routed their requests through neighborhood leaders. Answers to their questions were relayed in the same manner. Missouri volunteer leaders numbered nearly 60,000, and they contributed about 120,000 days of time to extension work last year. For years Utah has carried on an effective leadership-training program.

Much of the emphasis of 4-H Club work is placed on the discovery and development of future leadership. In 1944, 33,341 4-H Clubs engaged in community activities which demonstrated leadership. They improved school grounds, conducted local fairs, and sponsored community recreation.

Volunteer rural fire-fighting companies were established in California during the war by that State's extension organization. By 1945 more than 1,200 companies were active. Their membership is nearly 14,000 farmers. Workers believe this rural fire-fighting set-up saved \$10,000,000 worth of California resources during the first 3 years of war.

Neighborliness Has No Substitutes

There are no successful substitutes for the kind of neighborliness that causes people to share equipment or exchange labor. The initiative for this kind of cooperation usually is spontaneous, so the extension agent's job is to give training or help with organization. One example is the setting up of 70 custom spray rings to spray 17,000 acres of New York potatoes. In Alaska the potato harvest required the help of soldiers, women, and school children.

Girls of school age, usually 11 and 12, studied child care in a 4-H Club in or near the Rio Grande National Forest in Colorado. This new knowledge has made them of great assistance to their overbusy mothers. Throughout the country thousands of home demonstration clubwomen made new and appreciative friends through helping at sewing-machine clinics.

Clubwomen with handicraft experience have been generous in teaching their skills at veterans' hospitals under Red Cross guidance. One Indiana homemaker learned to weave at an extension short course 4 years ago. For the past 2 years she has been giving 1 day a week to teaching veterans at the Fort Harrison Hospital. The county home demonstration agent furnished two of the looms used there.

JMT Work New But Successful

There is one other means of helping people help themselves which is relatively new in extension teaching. It is a program of work simplification developed by the War Production Board's Training Within Industry program. Since it concerns principles it can be applied to any job in rural or urban homemaking or agriculture as well as to work in war plants, factories, and offices.

These principles are outlined in a four-step course known familiarly as JMT—job methods training. New Jersey extension workers and homemakers pioneered in becoming "time and motion minded," and JMT institutes have also been conducted in Tennessee, Kansas, Minnesota, Montana, Indiana, and New Hampshire. People trained at these institutes teach others, lay and professional, and so the technique spreads.

Simple ways of ironing shirts are cutting down on backaches and improving tempers, reports a Wyoming woman who washes and irons for eight children. A South Dakota woman found she went through 39 operations in making a pot of coffee. Applying JMT principles cut her operations to 16 and saved her 15 feet of walking every time she prepared coffee.

Other less fortunate women may have walked across continents just going to a well and back, and it will take devices as well as principles to remove this drudgery. But sometimes even simple devices will save innumerable steps. In the house, these may be cleaning baskets or carts, lap tables, insert shelves, or odd-sized ironing boards handy for shirts and some linens.

JMT applies equally well on the farmstead where farmers can save themselves energy by rearrangement or by using motor-driven devices. Feeding livestock offers a good example. And there are always farm commodities to be moved from one place to another—feed, wood, or water. JMT has taught people there are easier ways to do necessary jobs.

Discovered Skills Become Earning Sources

That phrase "helping themselves" sometimes means making a living. Often skills or services learned through extension teaching, especially home industries, enable families to supplement their incomes. Numbers of women sell at homemakers' markets, while others go into the mail-order business, making and selling such delicacies as fruit cake, canned chicken, and chili.

In Tennessee, where the home industries program has been especially successful, members of extension groups sold hand-made articles valued at more than \$30,000 last year. Rugs, baskets, hand weaving, pottery, and other traditional crafts were very popular in the markets.

Negro families have shown marked ability in tanning leather, curing meats, and making sirup.

Other Ways Are Found and Used

One way rural people are helping themselves is by the organization and spread of cooperatives. In this respect, Extension's job often is to help with organization procedure. Most cooperatives in this country are concerned with marketing, and therefore they draw heavily on economists and marketing specialists for advice. Last

year 11,832 cooperatives were aided in some way by extension workers. Of these, 1,056 were aided in organizing.

Extension workers do not render actual income-tax service to farm families. That is the job of the Bureau of Internal Revenue. But they do answer questions, obtain and publicize general interpretations of new rulings, and give aid to interested persons in account keeping. Many extension economists have published leaflets on income tax regulations pertaining to farmers and ranchmen. About 25,000 trained leaders in Missouri aided half the farmers in that State in preparing returns.

There is one way all these extension programs are tied together in a single approach. That is through the farm and home unit demonstration, sometimes called the whole farm or ranch demonstration. These are typical demonstration farms located in various types-of-farming areas. Families pledge to carry out improved practices in all phases of their operations, following long-time plans. This story is typical:

An Arkansas couple and their five children ranging in age from 6 to 15 constitute a demonstration family. They are buying a farm, and their 5-year plan includes the improvement of the house and furnishings, seeding the back yard, building a new walk, adding a porch to enclose the well, providing a laundry house in the back yard and a storage cellar, piping water to livestock, and many other changes toward more abundant living.

Extension workers who foster this type of work are enthusiastic. They say one of their great satisfactions is observing proof that "an enlightened people can be trusted to save themselves."

WE HELP HOLD THE LINE FOR POSTERITY

On Preventing Inflation

During the past year the cooperative Extension Service did its best to inform farm people of the stake they have in controlling inflation. The farm and home financial planning program emphasized the wisdom of savings and the wise use of credit. Farm families were urged to pay off debts. They were advised of the hazards of purchasing land and livestock at inflated prices. And they were urged to forego unnecessary purchases of farm machinery and household equipment; to put this money into war bonds and buy only when prices were lower and quality higher.

Land-appraisal demonstrations were held in many States. These demonstrations helped acquaint people with "normal values" of farm property. Among those taking part were 11,000 local leaders, Extension Service personnel, and representatives of the Farm Credit Administration, Farm Security Administration, and vocational agriculture. The purpose was to protect prospective land purchasers, especially war veterans.

Thrift, care, and conservation programs influenced farm families' interest in holding the line against inflation.

On Family Economics

Some folks are scared by the terminology of economics, but they appreciate help with ideas about farm family living. County extension agents, particularly home demonstration agents, have found

several successful ways of helping with these problems. In talks before farm groups they include timely information about changes in supplies and quality of clothing and other farm family necessities. They discuss the local applications of OPA regulations. In simple, conversational ways they give families the background that helps them make financial decisions.

The same type of help is given in what might be called Farm Family Living letters, which are informal but informational. Sometimes these letters are directed to special-interest groups such as war brides or people who live in war housing centers.

The war brought many changes in the business affairs of the farm family. Members needed information about making wills, powers of attorney, assigning allotments and insurance. Many needed help and advice about titles and mortgages or handling money matters for relatives overseas.

Because the extension agents are usually close to the rural families they serve, they get many questions about these problems. Often the primary job is to direct people to other sources of help. Sometimes the agent can give the information directly.

The war, too, has impressed on farm and ranch families the value of record keeping and of making current and long-time plans. In Illinois the Extension Service provides a home account calendar which simplifies the job of record keeping. Tennessee has a good "farm planning book" that is widely used.

Preparing for Peace

Farm people are as dead set as anybody on building a secure peace. It was Extension's job to stimulate them in their inclination to discuss the matter. Shortly before the San Francisco Conference ended, about 3,000 Vermont home demonstration clubwomen were completing a series of discussions on such questions as "Can we get on without wars?" They answered yes, and considered the proposals of Bretton Woods, Dumbarton Oaks, and other meetings aimed at doing just that.

Texas followed suit with similar discussions at home demonstration club meetings, then turned to the radio to provoke the general public's thought on the subject of international good will. Kits of material served a like purpose in New York.

Young people, too, can be counted on for intelligent opinions about current topics. Several States sponsor public-speaking programs. "Why I Believe Education for Peace Is Necessary" was the topic in Minnesota. More than 500 young people from 70 counties took part in this program.

In promoting this democratic study and self-expression, the Extension Service welcomed assistance from the Department of State and private organizations concerned with public affairs.

MEET THE MEN AND WOMEN OF TOMORROW

4-H Represents Quality and Quantity

A nation is likely to reevaluate its youth in time of war. And in this country, as elsewhere, youth's stock is going up. Through the 4-H program and extension programs for older youth, rural young people are becoming better equipped to assume their responsibilities as able, sturdy-minded citizens in the uncertain years ahead.

Numerically speaking, there are nearly 1,600,000 4-H members in the United States. Almost all of these are between the ages of 10 and 20; about 56 percent are girls and about 44 percent are boys. More than a fifth of the entire membership is in the 15-to-20 age bracket, which represents the largest number of older young people belonging to any organization in this country.

Although the rate of juvenile delinquency is as high among rural-bred youth as urban, it is no problem with 4-H Club members.

For one thing, 4-H members usually are too busy for unworthy behavior, as previous references in this report indicate. From the viewpoint of youth, 4-H Club work offers action, adventure, fun, comradeship, and work sufficient to all ambitions. Its all-important byproducts, from the educator's point of view, are character-building citizenship and sportsmanship, improved skills, and love of farm life.

Altogether, club members conducted 3,400,733 separate projects during 1944. Seventy-six percent of all members met certain standards and reported on their work. This is called "completing projects for the year," and 76 is the highest percentage of member completions ever reported in the history of 4-H work. It is 1 percent higher than a year earlier.

Leaders Aided

Much of the credit is due to voluntary local leaders, who last year held 328,487 meetings attended by 41½ million people. These local leaders, trained by Extension, are conducting nearly a thousand meetings for 4-H members every day of the calendar year. Almost all of the States have worked out some sort of recognition for this unselfish service.

Sometimes They Teach Their Elders

In Colorado 4-H Club members' yield of sugar beets was 14.37 tons an acre, 2 tons higher than the average of all growers in the area. 4-H Club girls in one Alabama county canned 13,972 quarts of fruit and 11,259 quarts of vegetables. The half million 4-H Club girls who enrolled in clothing demonstrations made over at least one garment apiece. They also specialized in attractive accessories, such as hats and purses.

Frequently 4-H members are educators, too. 4-H demonstration teams showed 4,500 people in Goliad County, Tex., how to control cattle grubs and lice. Their county agricultural agent estimated that 50 percent of the county's grub control work was traceable to these demonstrations.

Safety training enabled the boys of the McNeal, Ariz., club to save their schoolhouse from fire. A 4-H member directed the fire-fighting work. In Mississippi 1,800 4-H members were on the alert for farm home and woodland fires.

Older Young People Aided, Too

But 4-H Club members were not the only rural youths aided by Extension in 1944. Reports show that 368,194 older young people were reached as well. Iowa sponsored a series of rural youth camps at which young people talked about postwar opportunities and leavened serious discussions with plenty of recreation. Montgomery County, Mo., has a club for young farmers and their wives. Young

men deferred from military service for work in agriculture are getting special help through farmer clubs in New Hampshire.

Special efforts are being made to bring older girls into home demonstration clubs, along with married homemakers. Sometimes institute-type meetings are arranged for young mothers and brides. These are pitched upon the interests of young women—personality development, grooming and hygiene, the arts, entertaining in the home, and rural recreation. The social graces have proved a popular topic for both older boys and girls.

Extension workers everywhere are aware that only an eighth of all rural young people 18 to 26 years of age belong to any organized group. This fact poses a great challenge for the years ahead.

SCIENCE CHANGES AGRICULTURE AND HOMEMAKING

Research is constantly increasing the sum total of our knowledge about agriculture and homemaking. Frequently new discoveries are made before all the people have taken advantage of earlier ones, now outmoded. But this constant change is challenging to extension workers. It is their job to teach the best-known current methods.

Elsewhere in this report are numerous references to the changes science makes in the face of the land and in the home life of people who make their living from it. But a few instances of changes now being made are worthy of mention here.

A strain of tobacco resistant to Granville wilt was grown last year on farms in five Virginia counties where the disease was severe in 1943. In every instance it proved to be extremely resistant and produced good crops of marketable value. Logan, a new variety of snap bean, is making news in the vegetable kingdom.

In the Southwest sweet sudan is rapidly replacing the common type as stockmen's favorite temporary pasture for summer. Wisconsin has quickly adopted new and improved varieties of oats. In Nebraska a new oat variety named Cedar is expected to eliminate annual half-million-bushel losses from smut.

The public has been quick to understand the values of DDT. The spread of new types of turkeys is as rapid as the supply will allow. There has been great expansion in the use of mineral supplements for livestock in deficiency areas. Hay blowers are being built in many sections. Quick milking, either with machines or by hand, is replacing the old method on thousands of dairy farms.

North Carolina reports that the use of fertilizer is not only assuring greater cotton yields but has a definite relation to better grades of yarns, more mature and heavier fibers, and less manufacturing waste. Throughout the South farmers and manufacturers are recognizing the value of spinning performance along with grade and staple as a factor in the price of cotton.

The march of science is just as beneficial and as revolutionary in the home. Meat-canning investigations have developed new procedures. The food enrichment program, which had the support of extension workers along with nutrition committees, is resulting in improved diets for the Nation as a whole.

Homemakers are learning better methods of pretreatment for fruits and vegetables to be dried or frozen. Expansion of rural electrification will continue to reduce drudgery for millions of farm homemakers.

These, in brief, are some of the changes extension workers are helping to bring about.

Specialists Guide Agents' Teaching

In fostering these scientific changes among farm people and in keeping them informed of other developments, the county extension agents have the technical guidance of subject-matter specialists.

At the Federal Extension office there are specialists in crops, livestock, dairying, poultry, clothing, nutrition, home management, insect and disease control, forestry, soil conservation, social and economic problems, agricultural engineering, and other fields.

In the State Extension offices there are about 1,600 trained extension subject-matter specialists. They receive the latest technical information from the Federal specialists and otherwise. They consider it along with local needs and other local research discoveries and pass it on to the county extension agents. They are constantly available to help the county extension agents with specialized problems that arise.

There is also at the Federal and State offices a small corps of supervisors who give similar help in administrative and supervisory problems.

Likewise, a few information specialists at the Federal office and extension editors and radio and visual specialists or assistants in State offices help prepare educational materials and train the agents in the best use of newspapers, radio, movies, publications, and other devices in their educational work.

Publication Control Is Established

A new plan enabled the Department and the colleges to keep informed about each other's publication printing program. It eliminates duplication and saves money. The plan delegates to one person in each State the job of ordering all bulletins. This publication control representative consults with State staffs on the number of publications to be needed and plans for the effective distribution of printed materials.

A similar plan eliminates direct distribution from Washington of radio transcriptions, motion pictures, and news services for papers. These educational aids go to State extension services and are locally adapted, where practicable, before they reach their audience.

Each month the Extension Service Review, a professional journal, is issued for all Extension workers. It deals with programs and policies and educational methods that have proved successful. It reflects the high ideals and professional ethics that have guided extension workers for three decades.

WE STUDY OUR JOB

Extension Effectiveness Measured

The Extension Service is constantly studying the effectiveness of extension work. Programs, procedures, administration, and teaching methods all are examined in cooperative studies between Federal experts in such studies and the State extension services. This evaluation is aimed at growth and progress. So is the Extension Service program for training personnel. Training programs are conducted also for persons from other countries who expect to carry on extension work in their own lands.

One current study is an analysis of the job of the county home demonstration agent, and recommendations for a more effective program. During the past year 173 agents in 46 States obtained data on their jobs by keeping a daily time and job record in 2 seasons. These agents were selected by random sampling as suggested by the Division of Statistical Standards of the Bureau of the Budget. Here are some of the findings:

The work week of county home demonstration agents in the United States averages 52 hours.

Eighty-two percent work more than 4 hours on Saturdays. More than a third do some extension work on Sundays.

Teaching and travel consume about half of the home demonstration agent's time.

The average agent spends 1 hour a week of the 52 in service to individual families.

Findings will be of great value to agents, supervisors, and administrators in making the home demonstration program more effective.

A study similarly valuable was an evaluation of extension work in Windham County, Conn., where 200 farm families were interviewed by 10 local leaders who were trained for the job. They found that:

Agricultural practices are more widely adopted by farmers who have a large stake in the outcome of the farm enterprise.

The percentage of farm families participating in extension work is high. But some families never have participated. Largely these are families having no commercial farm enterprise.

Farm families, including families of part-time farmers, wish to make many improvements on their farms and in their homes after the war.

Actual and potential leadership is available in the county. Some member of one family out of every five has served as a local leader in Extension.

Teaching Devices Evaluated

The effectiveness of extension teaching methods also is studied. Among these devices are radio programs, written materials, and exhibits. Ward County, N. Dak., extension agents have been conducting radio programs for more than 5 years. A study of their work showed that one-third of the farm families in the county were listening each time the agents went on the air. It revealed conclusively that subject matter can be taught effectively by radio and that radio reaches a large number of farm families who seldom benefit otherwise from extension programs.

In the Connecticut, North Dakota, and other studies several scientific methods of sampling were followed. This was done to test the reliability of the various sampling methods.

Extension Pioneered in Readability

The Extension Service has pioneered in the movement to make written materials more readable. It set up the first readability laboratory in the Department of Agriculture and has given help and encouragement to other agencies interested in simplifying written materials.

During the year, extension publications from 47 States were analyzed for readability. Samples showed that about one-half were written in language and styles suitable for high school or college students. About three-fourths of farm adults have had 8 years or less of formal schooling. So it appears much more remains to be done in making extension publications more readily understood by all readers.

Extension Service arranged a publications workshop for Federal and State personnel at Columbia University in 1945. One objective was to further readability work in the States.

Many methods were used during the year for more efficient training of personnel. A manual was prepared for use by extension workers in training secretaries. Both Federal and State workers were given aid at an evaluation workshop held at the University of Chicago and in numerous job instruction training and job methods training courses.

Foreign Workers Trained

Extension's foreign student training program is now in its second year, and the demand for training of extension workers for other countries is growing. The program prepares the trainee for leadership among his own people. It prepares him for work with both youths and adults. Field work shows him how applied scientific agriculture and home economics can improve the farming efficiency, living standards, and health of a people.

During the year, 77 students—9 women and 68 men—from 11 countries were placed, trained, and supervised. They spoke five different languages. The countries they represented were Argentina, Brazil, Chile, China, Colombia, Ecuador, Haiti, Honduras, Jamaica, Peru, and Venezuela. All the students had guidance from agents and experience in working and living with farm families. Forty-eight States and Puerto Rico cooperated in the training of the students.

EXTENSION WORKERS LOOK AHEAD

Local Groups Are Planning

Now that this country is in a transition period from war to reconstruction, the average extension worker needs a crystal ball. But fortunately, rural people and extension leadership are not waiting to see what happens. In many counties local committees that have aided extension workers in program planning for numbers of years have begun to think through the adjustments that lie ahead. The point of view and approach, however, vary from State to State.

In Montana, local groups have been discussing possible changes in crop and livestock production for types-of-farming areas. Better balanced farming is the concern of individual farmers in the Midwest. The South is thinking about high-quality cotton with low-cost production, and many prophets expect a greater shift of livestock production to this area. Plenty of water, the potentialities of pasture development, and better insect control seem to assure this.

Higher wages for farm labor, improved machinery, shifting markets and market demands, and probable air transportation to market for farm produce can be expected to result in changes for the individual operator and for groups such as cooperatives and associations.

Nearly all soil-conservation districts have long-time programs for land use and soil and water conservation. As a rule these plans have been set up by district supervisors with the cooperation of the Soil Conservation Service, Extension Service, and other groups. Many hope to obtain used Army equipment for earth-moving jobs, large and small.

For the immediate future, local advisory committees are thinking about war veterans. Grant County, N. Mex., for instance, has in-

ventoried job possibilities and opportunities in agriculture. A committee in Sterling County, Tex., expects operators to improve or construct 1,700 miles of ranch roads and maintain 1,400 miles of fireguards.

Interest in Health Work Is Growing

The next two decades are likely to see greatly increased emphasis on improving the public health. The interest of local groups seems to bear this out. Most plans now being discussed include: (1) Provision of adequate hospital, infirmary, and laboratory facilities for rural areas; (2) doctors and other health personnel within reach of all people; and (3) plans for medical and dental service programs which take into account educational, preventive, and remedial needs.

Sustained food production to make good nutrition possible for everyone will always be a goal of the extension program. The school lunch program is expected to become a recognized responsibility of school systems. Home demonstration workers expect great changes in the field of food preservation, especially as home freezer units reach the market.

Further, cooperative Extension's job is to help carry the momentum of the wartime food program into the years of peace. If people gain both profit and enjoyment from producing much of their own food, they are likely to continue the practice.

Plans for Housing Begun

The average farm home in this country has sheltered at least two generations. In some areas three-fourths of all rural dwellings need repairs, and from one-fourth to one-half of them need remodeling.

Extension workers have been active in the work of postwar housing committees. As a result of their experience and consultation with farm and ranch people, they have a keen knowledge of features needed in planning the rural home of the future.

Research agencies are now at work determining the functional requirements of many farm structures. Distribution of surplus properties useful on the farm or in the home will merit attention. All this means much work for extension personnel in the years ahead.

Leaders Study National Policy

Extension leaders during the year joined other officials of the Association of Land-Grant Colleges in a study of postwar agricultural policy. Their report carried recommendations that can serve as a guide both to policy-forming officials and educational leaders. Further serious study of such policy problems is being given by a joint planning committee of the Department of Agriculture and the Land-Grant College Association and by the State extension services.

The Extension Service also sponsored a conference in Washington, D. C., of representatives of labor, business, agricultural, educational, welfare, and religious organizations. All these groups discussed for mutual benefit their problems and plans for the transition period. A number of similar State conferences were held.

Congress Grants Increase in Funds

During the year the Congress, in the Bankhead-Flannagan Act, laid the basis for further development of cooperative extension work, particularly at the county level. The Bankhead-Flannagan Act author-

izes a \$12,500,000 total increase in Federal funds over the next 3 years. Four and a half million dollars of the increase became available for the year beginning July 1, 1945. An additional \$4,000,000 is authorized to be appropriated for 1947 and \$4,000,000 more for 1948. After that the total additional sum of \$12,500,000 is authorized for each year. Two percent of this fund is authorized for Federal Extension administration.

Preliminary budgets from the State directors of extension work indicate that about 85 to 90 percent of the increase for 1945-46 will be used in the county extension offices. A considerable part will be used for strengthening 4-H Club, home demonstration, and Negro work in the counties.

The new funds, together with a \$2,302,000 increase in State and local appropriations for Extension, give a total of \$44,584,272 from all sources for cooperative extension work during the year beginning July 1, 1945. Of this amount, 47½ percent is State and local funds, and 52½ percent is Federal funds. That compares with total regular appropriations for the last year, ending June 30, 1945, of \$37,836,264; 50 percent of which came from Federal and 50 percent from State sources. No funds were withheld from the States during the year for failure to comply with the requirements set down by Congress.

On June 30, 1945, there were 8,928 regularly employed professional cooperative extension workers; slightly fewer than a year earlier. Of this number, 6,641 were employed in county offices, and 2,287 in State offices. There were 2,807 county agricultural agents, 2,017 county home demonstration agents, 242 county 4-H Club agents, 1,000 assistant agents, 547 Negro agents, and 1,654 State extension subject-matter specialists.

Out of additional temporary emergency funds from the War Food Administration and farm labor appropriations 866 emergency farm labor assistants and 1,695 emergency war food production and conservation assistants were employed, many of them for periods of only a few months.

CONCLUSION

This report deals with the activities of about 9,000 Extension workers during a single year. It is but one episode in a continued story.

Results of work recorded here may be spread over a period of years. Some are not measurable. A California olive grower knows that following an Extension recommendation to correct a boron deficiency increased his gross income by \$1,400 during a single year. But an Oklahoma club girl who applied her 4-H training in preparing meals for four harvest hands and herself during the 3 weeks of harvest cannot evaluate her service to her family or what she has earned.

Objectives of the cooperative Extension Service are both tangible and intangible, and it follows that results will be of both natures. What matters most is that this type of practical education, beginning where the people are, shall lead to more abundant living for people on the land.

STATISTICS

TABLE 1.—Number of counties with county extension agents, July 1, 1915, 1925, 1935, and 1945, and total number of extension workers, July 1, 1945

State	Counties in State	Counties with agents on July 1—								Total extension workers July 1, 1945
		1915		1925		1935		1945		
		Men	Women	Men	Women	Men	Women	Men	Women	
Alabama.....	67	67	19	59	37	67	44	67	67	385
Arizona.....	14	3	-----	12	9	11	6	12	¹ 9	35
Arkansas.....	75	52	20	50	39	75	72	75	75	231
California.....	58	11	-----	43	22	43	25	43	32	195
Colorado.....	63	13	-----	20	2	45	5	¹ 46	26	93
Connecticut.....	8	6	-----	8	7	8	8	8	8	61
Delaware.....	3	3	-----	3	-----	3	3	3	3	20
Florida.....	67	36	27	36	30	44	29	61	40	156
Georgia.....	159	81	48	121	61	155	80	140	¹ 114	365
Idaho.....	44	3	-----	16	27	31	37	¹ 33	¹ 44	58
Illinois.....	102	18	-----	95	21	97	39	¹ 102	¹ 82	263
Indiana.....	92	31	-----	79	1	91	12	92	58	238
Iowa.....	99	11	-----	99	15	99	35	97	74	276
Kansas.....	105	39	-----	63	15	100	27	99	52	229
Kentucky.....	120	39	19	72	24	114	29	¹ 116	¹ 76	258
Louisiana.....	64	43	13	48	24	62	52	64	64	263
Maine.....	16	3	-----	16	15	16	15	¹ 16	¹ 16	64
Maryland.....	23	13	6	23	19	23	23	23	23	105
Massachusetts.....	14	10	-----	11	11	11	10	11	11	94
Michigan.....	83	17	-----	57	5	73	5	¹ 82	¹ 46	203
Minnesota.....	87	23	-----	58	8	86	11	87	38	218
Mississippi.....	82	49	33	54	44	79	69	82	77	384
Missouri.....	114	15	-----	50	9	114	14	¹ 111	¹ 93	248
Montana.....	56	8	-----	23	6	40	8	¹ 46	19	71
Nebraska.....	93	8	-----	43	2	93	14	¹ 86	32	150
Nevada.....	17	-----	-----	8	9	14	6	¹ 15	¹ 10	24
New Hampshire.....	10	5	-----	10	8	10	10	10	10	63
New Jersey.....	21	7	-----	18	11	19	15	20	18	90
New Mexico.....	31	8	-----	21	5	24	10	30	14	57
New York.....	62	29	-----	55	38	51	37	56	¹ 51	359
North Carolina.....	100	64	34	74	49	97	53	100	100	410
North Dakota.....	53	15	-----	33	1	53	4	44	8	85
Ohio.....	88	10	-----	85	15	84	22	86	64	222
Oklahoma.....	77	56	24	65	44	77	68	77	77	235
Oregon.....	36	12	-----	28	3	34	6	36	23	111
Pennsylvania.....	67	14	-----	63	28	65	63	66	¹ 66	223
Rhode Island.....	5	-----	-----	5	2	5	5	¹ 5	¹ 5	22
South Carolina.....	46	43	24	40	38	46	46	46	46	206
South Dakota.....	69	5	-----	34	32	69	27	48	¹ 27	100
Tennessee.....	95	38	24	50	26	95	42	94	77	318
Texas.....	254	99	27	155	88	235	151	¹ 244	¹ 202	632
Utah.....	29	10	-----	18	11	21	8	¹ 27	¹ 13	63
Vermont.....	14	9	-----	12	7	14	11	14	12	63
Virginia.....	100	55	22	65	35	93	42	¹ 99	¹ 82	308
Washington.....	39	10	-----	26	5	38	8	¹ 37	25	104
West Virginia.....	55	27	10	36	15	44	27	¹ 52	38	164
Wisconsin.....	71	12	-----	48	1	65	7	68	¹ 48	196
Wyoming.....	23	6	-----	16	5	20	7	20	¹ 12	43
Alaska.....	4	-----	-----	-----	-----	-----	-----	4	4	6
Hawaii.....	5	-----	-----	-----	-----	4	4	5	5	53
Puerto Rico.....	36	-----	-----	-----	-----	-----	-----	36	31	105
Total.....	3, 115	1, 136	350	2, 124	929	2, 857	1, 351	2, 941	2, 247	8, 928

¹ Some agents cover 2 or more counties.

TABLE 2.—Expenditures of funds¹ from all sources for cooperative agricultural extension work in States, Alaska, Hawaii, and Puerto Rico for the year ended June 30, 1944, by sources of funds, and totals for 1939-43

State or territory	Grand total	Total Federal funds	Total within the State	Funds from Federal sources					Funds from within the State		
				U. S. Department of Agriculture		Smith-Lever and Bankhead-Jones	Capper-Ketcham	Additional cooperative	State and college	County	Farmers' organizations, etc.
				Clarke-McNary	Norris-Doxey						
Alabama	\$1,302,740.87	\$696,096.12	\$606,644.75	\$1,080.00		\$654,071.94	\$37,220.03	\$3,724.15	\$261,694.87	\$344,949.88	
Arizona	161,350.93	117,243.39	44,107.54			94,410.17	22,833.22		18,657.49	25,450.05	
Arkansas	905,439.28	570,592.69	334,846.59		\$841.50	529,584.67	33,217.36	6,949.16	255,527.05	79,319.54	
California	1,100,617.61	453,531.62	647,085.99	1,620.00		414,446.82	37,464.80		400,797.93	246,288.06	
Colorado	415,090.52	211,821.59	203,268.93	810.00		158,977.29	24,638.47		102,550.34	100,718.59	
Connecticut	329,388.67	132,146.53	197,242.14	1,620.00		105,726.57	24,799.96		120,768.42	51,500.00	\$24,973.72
Delaware	88,532.63	71,917.56	16,615.07			50,810.74	21,106.82		15,927.95	1,687.12	
Florida	485,402.11	229,683.54	255,718.57	1,620.00		200,645.82	27,417.72		103,213.58	152,504.99	
Georgia	1,162,360.70	734,018.45	428,342.25		1,620.00	668,110.80	37,854.95	26,432.70	167,810.86	258,533.57	1,997.82
Idaho	268,564.36	155,807.71	112,756.65	1,620.00		127,709.65	23,032.55	3,445.51	40,550.61	72,206.04	
Illinois	1,318,632.27	524,144.14	794,488.13	1,620.00		479,063.57	34,504.17	7,336.40	196,373.71	9,873.92	
Indiana	1,131,123.93	467,999.29	663,124.64	1,620.00		432,965.02	33,414.27		300,644.66	314,826.67	588,240.50
Iowa	1,315,226.46	530,859.72	784,366.74	405.00	1,254.00	468,515.29	32,664.80	28,020.63	197,476.53	333,664.14	47,653.31
Kansas	1,070,116.14	401,912.75	668,203.39		67.50	322,515.12	29,109.35	50,220.78	126,993.40	420,070.91	253,226.07
Kentucky	1,010,361.22	664,989.49	345,371.73	1,620.00		625,981.53	37,387.96		155,000.00	189,111.82	1,259.91
Louisiana	868,205.05	469,518.20	398,686.85	1,620.00		435,848.30	32,049.90		278,210.74	117,376.11	3,100.00
Maine	258,977.70	157,659.75	101,317.95	1,620.00		129,431.86	24,391.36	2,216.53	53,418.98	44,959.19	2,939.78
Maryland	407,643.62	199,371.97	208,271.65		1,619.76	171,298.96	26,453.25		116,949.65	91,322.00	
Massachusetts	497,464.65	122,381.36	375,083.29	1,620.00		96,778.71	23,982.65		129,732.82	245,350.47	
Michigan	836,918.41	510,765.36	326,153.05	1,620.00		471,836.40	35,688.96		233,605.45	92,547.60	
Minnesota	844,556.39	466,823.67	377,732.72	540.00		434,070.36	32,213.31		148,575.74	213,264.31	15,892.67
Mississippi	1,145,839.99	696,459.66	449,380.33	1,350.00		659,454.04	35,250.62		150,493.47	293,521.94	5,364.92
Missouri	931,081.01	602,954.95	328,126.06		463.50	564,917.54	35,886.93	1,086.98	118,593.79	185,143.16	24,389.11
Montana	377,664.49	174,646.34	203,018.15	1,235.68		118,162.50	23,030.42	32,217.74	53,147.31	149,870.84	5,774.83
Nebraska	613,110.10	344,778.14	268,331.96	1,620.00		266,393.57	26,982.76	49,781.81	100,217.21	162,339.92	
Nevada	138,377.09	73,101.85	65,275.24		70.00	40,493.58	20,583.19	11,955.08	35,864.50	29,410.74	
New Hampshire	237,853.34	94,726.48	143,126.86	1,539.00		70,238.64	21,814.30	1,134.54	75,505.04	67,621.82	
New Jersey	491,980.69	172,649.37	319,331.32	1,620.00		136,209.13	26,666.64	8,153.60	114,298.34	202,051.07	2,981.91
New Mexico	261,193.44	142,619.52	118,573.92			119,523.81	23,095.71		72,340.67	46,233.25	
New York	1,915,825.97	492,608.94	1,423,157.03	1,620.00	1,530.00	449,618.20	39,900.74		546,712.92	862,855.70	13,588.41
North Carolina	1,642,776.03	856,411.23	786,364.80	1,620.00		812,167.22	42,624.01		270,016.23	516,348.57	
North Dakota	379,005.43	241,215.78	137,789.65	1,336.00		177,060.75	24,442.25	38,376.78	27,269.68	110,519.97	
Ohio	1,106,675.05	622,820.95	483,854.10	1,620.00		581,214.55	39,986.40		249,459.65	234,394.45	
Oklahoma	920,332.36	554,221.71	366,110.65		1,620.00	468,568.12	32,688.61	51,344.98	251,200.00	114,910.65	
Oregon	617,916.31	187,776.87	430,139.44			162,916.56	24,860.31		264,157.50	146,224.71	19,757.23

Pennsylvania.....	1,068,582.80	642,341.19	426,241.61	1,260.00	-----	592,222.01	48,859.18	-----	301,241.61	125,000.00	-----
Rhode Island.....	79,347.55	55,300.59	24,046.96	-----	-----	34,778.31	20,522.28	-----	6,890.36	12,375.00	4,781.60
South Carolina.....	755,247.93	500,037.33	255,210.60	1,620.00	1,620.00	461,957.51	32,487.60	2,352.22	206,500.00	48,110.60	600.00
South Dakota.....	369,399.76	254,838.76	114,561.00	-----	-----	169,155.59	24,223.30	59,839.87	63,840.00	50,721.00	-----
Tennessee.....	1,031,873.18	661,564.55	370,308.63	1,620.00	-----	623,494.36	36,450.19	-----	200,000.00	167,388.63	2,920.00
Texas.....	2,155,380.99	1,191,069.93	964,311.06	1,620.00	-----	1,056,695.90	50,515.24	82,238.79	361,551.47	601,559.59	1,200.00
Utah.....	234,273.46	122,110.74	112,162.72	1,240.50	-----	85,130.44	22,132.38	13,607.42	65,823.72	46,339.00	-----
Vermont.....	223,749.92	113,085.91	110,664.01	405.00	-----	85,171.59	22,055.51	5,453.81	63,596.15	39,704.62	7,363.24
Virginia.....	1,050,171.29	545,203.93	504,967.36	1,620.00	-----	508,488.49	35,095.44	-----	327,726.25	177,241.11	-----
Washington.....	454,667.73	236,488.94	218,178.79	-----	-----	209,551.02	26,937.92	-----	91,476.58	126,702.21	-----
West Virginia.....	600,971.78	352,819.29	248,152.49	-----	1,620.00	319,286.65	31,912.64	-----	190,169.69	54,311.82	3,670.98
Wisconsin.....	879,781.58	459,237.29	420,544.29	1,620.00	810.00	422,889.19	32,703.17	1,214.93	159,376.42	246,936.86	14,231.01
Wyoming.....	197,631.13	109,642.21	87,988.92	-----	-----	67,441.38	21,368.92	19,571.91	43,411.09	44,577.83	-----
Alaska.....	33,831.01	23,950.00	9,881.01	-----	-----	13,950.00	10,000.00	-----	9,881.01	-----	-----
Hawaii.....	217,151.63	127,331.25	89,820.38	-----	1,260.00	88,094.83	21,385.77	16,590.65	89,820.38	-----	-----
Puerto Rico.....	433,622.10	241,618.15	192,003.95	1,228.50	-----	240,389.65	-----	-----	192,003.95	-----	-----
Total, 1944.....	36,344,028.66	18,782,976.75	17,561,051.91	47,709.68	19,661.26	16,678,434.72	1,485,908.29	551,262.80	8,127,065.77	8,266,940.04	1,167,046.10
1943.....	34,988,131.46	18,799,715.56	16,188,415.90	53,182.08	24,902.31	16,683,768.54	1,489,653.88	548,208.75	7,415,254.10	7,769,155.79	1,004,006.01
1942.....	34,474,580.36	18,868,789.90	15,605,790.46	56,214.56	32,608.10	16,743,755.96	1,489,051.97	547,159.31	7,016,210.64	7,477,325.58	1,112,254.24
1941.....	33,464,948.69	18,574,796.28	14,890,152.41	57,527.65	32,590.50	16,791,686.21	1,489,991.92	203,000.00	6,638,008.75	7,183,728.00	1,088,415.66
1940.....	33,052,000.20	18,530,181.35	14,521,818.85	68,428.64	12,170.42	16,760,011.53	1,487,475.76	202,095.00	6,438,010.62	7,091,798.95	992,009.28
1939.....	32,402,254.87	17,955,485.71	14,446,769.16	50,247.42	-----	16,142,847.90	1,487,418.88	274,971.51	6,660,961.17	6,844,259.39	941,548.60

¹ Not including War Food Administration or Farm Labor funds.

TABLE 3.—Sources of funds allotted for cooperative extension work in States, Alaska, Hawaii, and Puerto Rico for the year ended June 30, 1945

State	Grand total	Total Federal funds	Total within the State	Funds from Federal sources				Funds from within the State			
				U. S. Department of Agriculture		Smith-Lever and Bankhead-Jones	Capper-Ketcham	Additional cooperative	State and college	County	Farmers' organizations, etc.
				Clarke-McNary	Norris-Doxey						
Connecticut-----	\$345, 097. 95	\$133, 539. 95	\$211, 558. 00	\$1, 620. 00	-----	\$107, 119. 99	\$24, 799. 96	-----	\$127, 868. 00	\$53, 000. 00	\$30, 690. 00
Delaware-----	93, 598. 21	76, 723. 21	16, 875. 00	-----	-----	55, 616. 39	21, 106. 82	-----	16, 375. 00	500. 00	-----
Maine-----	268, 650. 82	159, 279. 75	109, 371. 07	1, 620. 00	\$1, 620. 00	129, 431. 86	24, 391. 36	\$2, 216. 53	66, 911. 07	42, 460. 00	-----
Maryland-----	434, 697. 34	199, 372. 21	235, 325. 13	-----	1, 620. 00	171, 298. 96	26, 453. 25	-----	132, 792. 13	102, 533. 00	-----
Massachusetts-----	551, 831. 26	141, 234. 87	410, 596. 39	1, 620. 00	-----	115, 632. 22	23, 982. 65	-----	138, 631. 00	271, 965. 39	-----
New Hampshire-----	246, 472. 27	94, 807. 48	151, 664. 79	1, 620. 00	-----	70, 238. 64	21, 814. 30	1, 134. 54	82, 272. 24	69, 392. 55	-----
New Jersey-----	519, 626. 05	172, 649. 37	346, 976. 68	1, 620. 00	-----	136, 209. 13	26, 666. 64	8, 153. 60	119, 188. 76	224, 537. 92	3, 250. 00
New York-----	2, 099, 814. 13	501, 467. 40	1, 598, 346. 73	1, 620. 00	-----	458, 078. 79	40, 148. 61	-----	576, 613. 58	737, 737. 96	283, 995. 19
Pennsylvania-----	1, 125, 207. 00	646, 045. 80	479, 161. 20	1, 260. 00	-----	595, 926. 62	48, 859. 18	-----	354, 161. 20	125, 000. 00	-----
Rhode Island-----	88, 691. 25	61, 034. 47	27, 656. 78	-----	-----	40, 512. 19	20, 522. 28	-----	10, 000. 00	13, 625. 00	4, 031. 78
Vermont-----	231, 857. 56	114, 300. 91	117, 556. 65	1, 620. 00	-----	85, 171. 59	22, 055. 51	5, 453. 81	68, 925. 65	40, 700. 00	7, 931. 00
West Virginia-----	616, 890. 89	352, 819. 29	264, 071. 60	-----	1, 620. 00	319, 286. 65	31, 912. 64	-----	191, 575. 00	67, 756. 60	4, 740. 00
Total-----	6, 622, 434. 73	2, 653, 274. 71	3, 969, 160. 02	12, 600. 00	6, 480. 00	2, 284, 523. 03	332, 713. 20	16, 958. 48	1, 885, 313. 63	1, 749, 208. 42	334, 637. 97
Alabama-----	1, 387, 256. 12	698, 256. 12	689, 000. 00	1, 620. 00	1, 620. 00	654, 071. 94	37, 220. 03	3, 724. 15	339, 000. 00	350, 000. 00	-----
Arkansas-----	932, 384. 30	580, 330. 30	352, 054. 00	-----	1, 620. 00	538, 543. 78	33, 217. 36	6, 949. 16	265, 000. 00	87, 054. 00	-----
Florida-----	535, 648. 54	229, 683. 54	305, 965. 00	1, 620. 00	-----	200, 645. 82	27, 417. 72	-----	140, 465. 00	165, 500. 00	-----
Georgia-----	1, 187, 422. 45	735, 638. 45	451, 784. 00	1, 620. 00	-----	668, 110. 80	37, 854. 95	26, 43. .	150, 240. 00	300, 044. 00	1, 500. 00
Kentucky-----	952, 539. 49	664, 989. 49	287, 550. 00	1, 620. 00	-----	625, 981. 53	37, 387. 96	-----	170, 500. 00	117, 050. 00	-----
Louisiana-----	1, 050, 394. 20	469, 518. 20	580, 876. 00	1, 620. 00	-----	435, 848. 30	32, 049. 90	-----	451, 422. 54	125, 753. 46	3, 700. 00
Mississippi-----	1, 156, 425. 66	696, 324. 66	460, 101. 00	1, 620. 00	-----	659, 454. 04	35, 250. 62	-----	147, 326. 00	305, 855. 00	6, 920. 00
North Carolina-----	1, 409, 389. 93	856, 411. 23	552, 978. 70	1, 620. 00	-----	812, 167. 22	42, 624. 01	-----	251, 032. 00	321, 946. 70	-----
Oklahoma-----	938, 128. 71	554, 221. 71	383, 907. 00	-----	1, 620. 00	468, 568. 12	32, 688. 61	51, 344. 98	251, 200. 00	132, 707. 00	-----
South Carolina-----	751, 530. 24	500, 037. 33	251, 492. 91	1, 620. 00	1, 620. 00	461, 957. 51	32, 487. 60	2, 352. 22	206, 500. 00	44, 392. 91	600. 00
Tennessee-----	1, 035, 977. 85	661, 564. 55	374, 413. 30	1, 620. 00	-----	623, 494. 36	36, 450. 19	-----	200, 000. 00	172, 613. 30	1, 800. 00
Texas-----	2, 191, 238. 53	1, 191, 069. 93	1, 000, 168. 60	1, 620. 00	-----	1, 056, 695. 90	50, 515. 24	82, 238. 79	365, 118. 00	631, 565. 60	3, 485. 00
Virginia-----	1, 189, 044. 48	546, 823. 93	642, 220. 55	1, 620. 00	-----	508, 488. 49	35, 095. 44	-----	440, 720. 55	200, 505. 00	995. 00
Total-----	14, 717, 380. 50	8, 384, 869. 44	6, 332, 511. 06	17, 820. 00	9, 720. 00	7, 714, 027. 81	470, 259. 63	173, 042. 00	3, 358, 524. 09	2, 954, 986. 97	19, 000. 00

Illinois.....	1, 240, 904. 13	583, 329. 13	657, 575. 00	1, 620. 00	1, 620. 00	531, 169. 12	38, 183. 11	10, 736. 90	225, 575. 00	7, 000. 00	425, 000. 00
Indiana.....	1, 051, 456. 67	468, 615. 67	582, 841. 00	1, 620. 00	433, 581. 40	433, 581. 40	33, 414. 27	-----	305, 050. 00	275, 891. 00	1, 900. 00
Iowa.....	1, 431, 319. 41	532, 440. 72	898, 878. 69	1, 620. 00	468, 515. 29	468, 515. 29	32, 664. 80	28, 020. 63	288, 165. 93	318, 912. 76	291, 800. 00
Kansas.....	1, 034, 724. 36	403, 995. 43	630, 728. 93	1, 620. 00	323, 026. 48	323, 026. 48	29, 120. 22	50, 228. 73	164, 680. 00	360, 857. 60	105, 191. 33
Michigan.....	1, 020, 680. 36	510, 765. 36	509, 915. 00	1, 620. 00	471, 836. 40	471, 836. 40	35, 688. 96	-----	315, 290. 00	194, 625. 00	-----
Minnesota.....	832, 148. 21	494, 436. 21	337, 712. 00	1, 620. 00	458, 982. 90	458, 982. 90	32, 213. 31	-----	145, 712. 00	181, 000. 00	11, 000. 00
Missouri.....	982, 750. 45	604, 111. 45	378, 639. 00	1, 620. 00	564, 917. 54	564, 917. 54	35, 886. 93	1, 686. 98	165, 639. 00	213, 000. 00	-----
Nebraska.....	641, 115. 14	344, 778. 14	296, 337. 00	1, 620. 00	266, 393. 57	266, 393. 57	26, 982. 76	49, 781. 81	117, 500. 00	174, 437. 00	4, 400. 00
North Dakota.....	408, 747. 65	249, 102. 60	159, 645. 05	1, 620. 00	184, 334. 82	184, 334. 82	24, 442. 25	38, 705. 53	37, 491. 05	122, 154. 00	-----
Ohio.....	1, 123, 485. 46	627, 028. 46	496, 457. 00	1, 620. 00	585, 422. 06	585, 422. 06	39, 986. 40	-----	232, 095. 00	260, 962. 00	3, 400. 00
South Dakota.....	381, 426. 22	260, 808. 45	120, 617. 77	1, 620. 00	175, 125. 28	175, 125. 28	24, 223. 30	59, 839. 87	63, 840. 00	56, 777. 77	-----
Wisconsin.....	941, 448. 86	488, 791. 86	452, 657. 00	1, 620. 00	451, 633. 76	451, 633. 76	32, 703. 17	1, 214. 93	148, 058. 00	304, 599. 00	-----
Total.....	11, 090, 206. 92	5, 568, 203. 48	5, 522, 003. 44	14, 580. 00	4, 914, 938. 62	4, 914, 938. 62	385, 509. 48	240, 215. 38	2, 209, 095. 98	2, 470, 216. 13	842, 691. 33
Arizona.....	203, 620. 00	117, 243. 39	86, 376. 61	-----	94, 410. 17	94, 410. 17	22, 833. 22	-----	55, 503. 81	30, 872. 80	-----
California.....	1, 080, 980. 00	453, 531. 62	627, 448. 38	1, 620. 00	414, 446. 82	414, 446. 82	37, 464. 80	-----	356, 688. 38	270, 760. 00	-----
Colorado.....	433, 909. 59	212, 271. 59	221, 638. 00	1, 260. 00	158, 977. 29	158, 977. 29	24, 638. 47	27, 395. 83	97, 400. 00	119, 738. 00	4, 500. 00
Idaho.....	264, 807. 71	155, 807. 71	109, 000. 00	1, 620. 00	127, 709. 65	127, 709. 65	23, 032. 55	3, 445. 51	40, 000. 00	69, 000. 00	-----
Montana.....	411, 722. 00	174, 670. 66	237, 051. 34	1, 260. 00	118, 162. 50	118, 162. 50	23, 030. 42	32, 217. 74	69, 950. 00	167, 101. 34	-----
Nevada.....	149, 570. 51	74, 231. 85	75, 338. 66	-----	40, 493. 58	40, 493. 58	20, 583. 19	11, 955. 08	43, 338. 66	32, 000. 00	-----
New Mexico.....	371, 660. 64	142, 619. 52	229, 041. 12	-----	119, 523. 81	119, 523. 81	23, 095. 71	-----	92, 721. 12	136, 320. 00	-----
Oregon.....	696, 123. 80	189, 396. 87	506, 726. 93	1, 620. 00	162, 916. 56	162, 916. 56	24, 860. 31	-----	330, 427. 93	176, 299. 00	-----
Utah.....	239, 699. 00	122, 130. 24	117, 568. 76	1, 260. 00	85, 130. 44	85, 130. 44	22, 132. 38	13, 607. 42	71, 229. 76	46, 339. 00	-----
Washington.....	553, 547. 59	239, 310. 33	314, 237. 26	1, 620. 00	210, 598. 38	210, 598. 38	27, 091. 95	-----	108, 349. 00	205, 888. 26	-----
Wyoming.....	227, 781. 47	109, 642. 21	118, 139. 26	1, 260. 00	67, 441. 38	67, 441. 38	21, 368. 92	19, 571. 91	66, 550. 76	51, 588. 50	-----
Total.....	4, 633, 422. 31	1, 990, 855. 99	2, 642, 566. 32	11, 520. 00	1, 599, 810. 58	1, 599, 810. 58	270, 131. 92	108, 193. 49	1, 332, 159. 42	1, 305, 906. 90	4, 500. 00
Alaska.....	34, 050. 00	23, 950. 00	10, 100. 00	-----	13, 950. 00	13, 950. 00	10, 000. 00	-----	10, 100. 00	-----	-----
Hawaii.....	284, 614. 49	127, 331. 25	157, 283. 24	-----	88, 094. 83	88, 094. 83	21, 385. 77	16, 590. 65	157, 283. 24	-----	-----
Puerto Rico.....	450, 735. 19	244, 935. 19	205, 800. 00	1, 620. 00	243, 315. 19	243, 315. 19	-----	-----	205, 800. 00	-----	-----
Unallotted.....	3, 420. 00	3, 420. 00	-----	340. 00	-----	-----	-----	-----	-----	-----	-----
Grand total.....	37, 836, 264. 14	18, 996, 840. 06	18, 839, 424. 08	58, 480. 00	16, 858, 660. 06	16, 858, 660. 06	1, 490, 000. 00	555, 000. 00	9, 158, 276. 36	8, 480, 318. 42	1, 200, 829. 30

